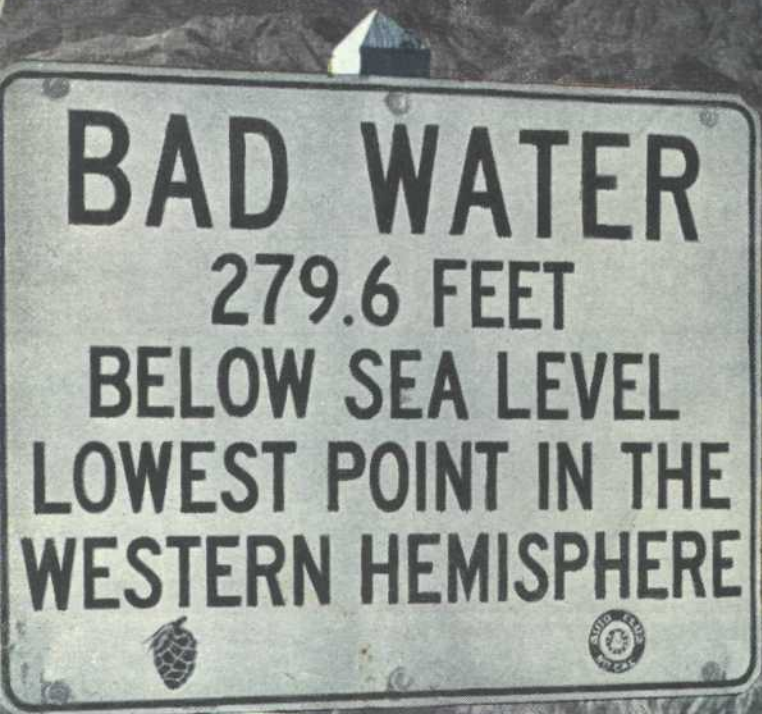


Desert

DECEMBER, 1951 . . . 25 Cents





Desolation Canyon in Death Valley. Scene of the first annual encampment program held two years ago.

Thousands Plan Trek to Death Valley

ASSEMBLING TO honor the memory of early Western pioneers, thousands of families will attend the third annual Death Valley Encampment December 1 and 2 at famous Furnace Creek, California.

Overnight camping under the stars is fun looked forward to by many who have made the trek before. Outdoor clothes, duffels, cooking utensils, dishes and food are included on a camping list published by the Death Valley '49ers, non-profit sponsors of the annual pioneer observance. Water is available and fire wood will be sold at Furnace Creek ranch.

Sunday morning, campers will arise at dawn for a four-mile trek to Desolation canyon, for sunrise religious services in this beautiful natural sanctuary.

Rededication of the Death Valley marker at Furnace Creek will follow the Authors' Outdoor Barbecue Breakfast at Furnace Creek golf course. Guests of honor, 12 celebrated writers of Western lore and fiction, are scheduled speakers.

Square dancing and community singing are high-

lights of the Saturday evening program on the outdoor pavilion of Furnace Creek ranch.

Several exhibits are planned for both days. Gem and mineral societies will show their best specimens from the four counties represented in the encampment — Los Angeles, Kern, Inyo and San Bernardino. The Death Valley area is one of the most amazing geological regions in the world and has yielded many interesting mineralogical specimens.

A fine collection of paintings, picturing scenes of southwest desert and mountain regions, has been assembled by John W. Hilton and his committee. Floyd D. Evans has arranged a photographic exhibit which will open December 1 and continue for two weeks in the lounge of Furnace Creek Inn.

The '49ers extend an invitation to everyone interested in the West. John Anson Ford, president, especially urges families to take advantage of the outdoor camping opportunity. The week-end program is designed to appeal to all ages.

DESERT CALENDAR

- November 22-25—Southern California Chapter of the Sierra Club plans Thanksgiving at Furnace Creek Camp Ground, Death Valley.
- November 23-25—Sierra Club's Desert Peaks Section field trip to Mount Picacho and Castle Dome, north of Yuma in Arizona.
- November 24-25—Brawley Gem and Mineral society show, Brawley Union High School, Brawley, California.
- December 1—"Shalako" celebration and house dances, Zuni Pueblo, New Mexico.
- December 1—International Children's Xmas Parade, Calexico, California.
- December 1-2—Death Valley Encampment, Airport, near Furnace Creek, Death Valley, California.
- December 1-31—Special Exhibit, Archeological Collection from the Highlands of Mexico. Southwest Museum, Los Angeles, California.
- December 2—Sierra Club, Southern California Chapter, trip to Kitching Peak, southwest peak in the San Bernardino range.
- December 3—Palm Springs National Dog Show, Polo Grounds, Palm Springs, California.
- December 8-9—Sierra Club's Desert Peaks Section climb to Rabbit Peak, Santa Rosa Mountains.
- December 10-12—Pilgrimage and celebration by Tagua Indians, Las Cruces, New Mexico.
- December 11—Eve of Feast Day of Nuestro Senora de Guadalupe. Celebrated in Taos and Santa Fe, New Mexico.
- December 15-16—Overnight Field Trip to Parker Dam and Havasu Lake. Palm Springs Desert Museum, Palm Springs, California.
- December 16—Don's Club trek to Fort McDowell, Phoenix, Arizona.
- December 16-31—Nightly pageant processions (Posadas), Mesilla, New Mexico.
- December 17—Bandollero Tour to Buttercup Valley, Yuma, Arizona.
- December 17—Desert Geography lecture series: "Erosion on the Desert." Palm Springs Desert Museum, Palm Springs, California.
- December 24—Christmas Eve in Spanish villages of New Mexico. Bonfires for El Santo Nino (the Christ Child) in streets.
- December 24—Night Cedar Torch Procession, Taos Pueblo, New Mexico.
- December 25-28—Deer Dance and Indian dances at Jemez, Santo Domingo, Tesuque, Santa Clara and other Taos Pueblos, New Mexico.
- December 26—Turtle Dance, San Juan Pueblo, New Mexico.
- December 30—Desert Sun Ranchers' Rodeo at Rancho de Los Caballeros, Wickenburg, Arizona.
- December 31—Deer Dance, Sandia Pueblo, New Mexico.
- December 31-January 1—Annual Pegleg Smith Lost Gold Trek and Liar's Contest. Borrego Valley, California.



Volume 14

DECEMBER, 1951

Number 14

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From Goldpoint, the road to Tule canyon crosses Lida valley, a wide, flat, uninhabited expanse dotted with Joshua trees.

Golden Treasure of Tule Canyon

By NELL MURBARGER

Photographs by the author

Map by Norton Allen

UNDER THE hot blanket of mid-day, the old Nevada mining camp of Goldpoint lay napping on its sun-seared mountain. Neither dog, nor burro, nor human being — not even a stray breath of air — appeared to be stirring; and but for my own car, not a wheel disturbed the silence of Main street.

Parking in the thin shade of a lone Joshua tree in front of the general store, I brushed the accumulated dust from my levis and crossed the splintered porch to the open door. The room that lay beyond was small and crowded and dark; but in the cordial greeting and friendly handclasp of its proprietor lay a welcome as big and sincere as all outdoors.

To Goldpoint, Harry Wiley is sort of an institution; an unofficial mayor, information bureau, and Rotary club all rolled into one. Present at the

founding of this once-important mining center, he has shared every phase of its shifting fortune for nearly 50 years. And now, with the old camp tottering on the brink of oblivion, with barely a dozen inhabitants remaining, it is Harry who stays on to operate its surviving store and service station. In addition, his store houses the post-office—managed by Mrs. Wiley—and Harry is perennially reelected to the office of state senator.

Following the usual comments concerning health, weather, and condition of roads, I steered the conversation around to the reason for my visit.

"This place you mentioned in your letter," I asked, "this Tule Canyon . . . just what is the nature of it?"

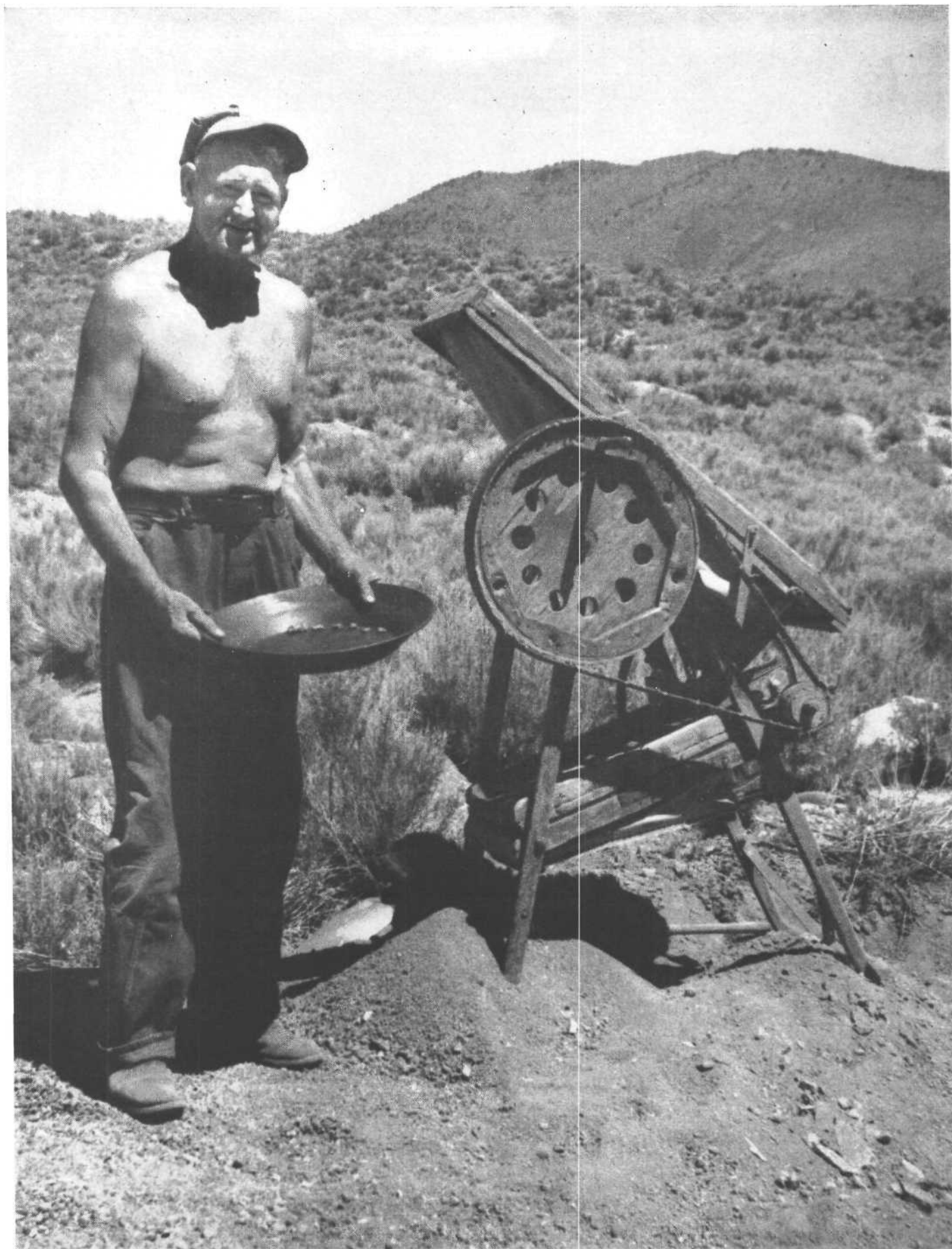
"You'll like it!" declared Harry with conviction. "It's a deep wide canyon 15 miles long. Mainly it lies in Nevada, but its delta stretches across the

No one knows when gold first was discovered in Nevada's Tule Canyon. The Indians probably were there before the white men came — at least some of their ancient artifacts have been unearthed. Today, after a century of known mining activity, a few prospectors still work the old placer ground, and occasionally they find sizeable nuggets which survived the gold rush of an earlier period.

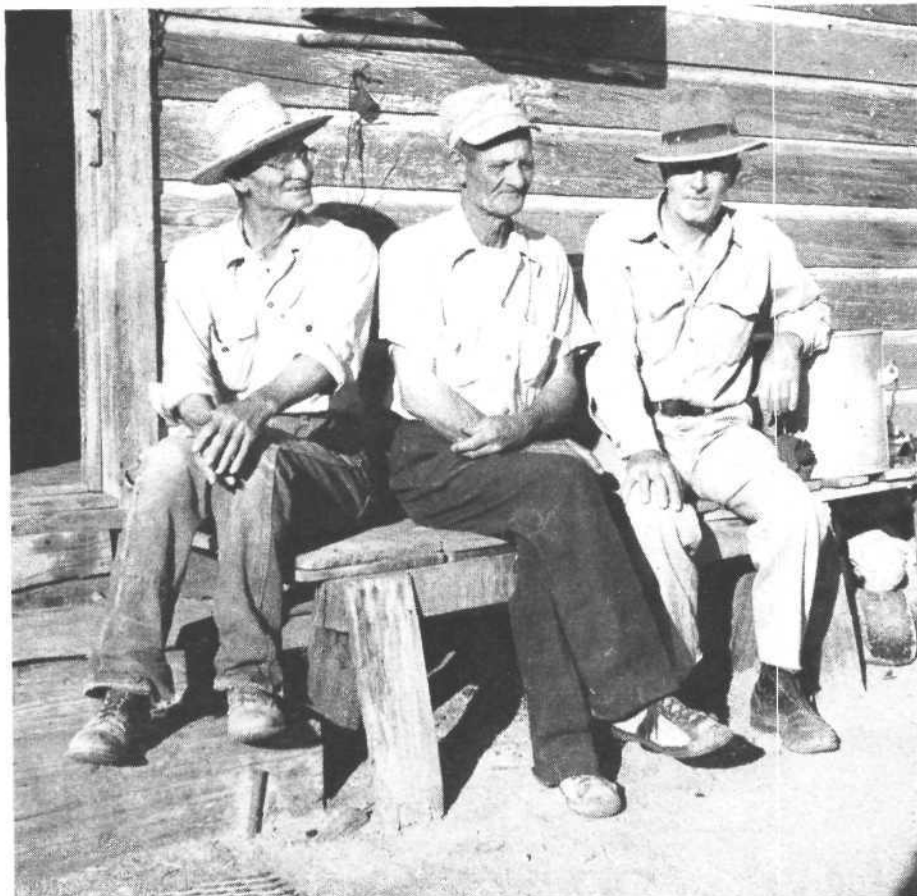
California-Nevada state line into the north end of Death Valley, just northeast of Sand Springs. Its chief interest lies in the fact that it is one of the earliest placer mining centers in Nevada.

"No man living," he continued, "can remember when Tule wasn't being mined, either by Indians, Chinese, whites, or Mexicans. Official mining reports have suggested the possibility that mining may have been carried on here before the big California gold rush of 1849; and when old timers, like Bill Scott and Alexander Palm, came to Tule in 1872, the canyon sides were already studded with abandoned mines, and there were ruins of old stone walls laid so many years before that no one had any idea who their builders might have been.

"What's more important," he added, warming to the subject, "there's still gold at Tule . . . and men are still



Harold Strom and the dry-washer with which he works the placer deposits of Tule canyon. In the pan are some of the larger nuggets he has recovered in recent months, ranging in value from \$5 to \$15 each.



Modern prospectors of Tule canyon claims, Raymond (left) and Oscar Williams sit before their desert cabin and recall with Fred Green (right) the history of this ancient mining area.

mining it! A fellow dry-washing on my claim last spring, took out an \$80 nugget and a jarful of coarse gold ranging from the size of turnip seed to nuggets worth five and ten dollars each.

"Well," he interrupted himself, "how does it sound?"

"It sounds," I replied, "like more! A lot more!"

"Tell you what," suggested the Senator, "let's go talk with Fred Green. He and the Williams boys hold most of the placer ground in the area, my claims being a notable exception, and Fred's dug up a lot of Tule's early history."

Leaving the store and postoffice to their own devices, we ambled down the street to Fred Green's place. A lifelong miner, himself, and the son and grandson of miners, Fred was born in Grass Valley, California—the world's greatest cradle of gold-mining lore. After a boyhood spent there and in the wild and woolly boom camp of Bodie, he made the rounds of the mining country—up and down, over and across — until the dream of reviving Tule came to possess him.

Greetings had barely been exchanged before our impromptu conference was joined by Sheriff Ed Kitchen, of Esmeralda county, whose first-hand

knowledge of Tule extends for a considerable distance back into history.

As the afternoon wore on and the sun dropped lower over the rocky range to the west, Harry and Fred and the sheriff regaled me with tales of the canyon; anecdotes of its early days and the men and women who had lived there, and died there.

Mostly they talked of "Honest Tom" Jagers, an incredible character, who had drifted into Tule in the middle 1890's, his belongings packed on a very small and very skinny burro.

"He always wore a Prince Albert coat and a tall silk hat," recalled Harry. The sheriff nodded, and grinned.

"Yeah . . . and a holster with two big guns in it! He claimed to be a right bad hombre, too; said he had killed more than one man and wouldn't stand for any damned foolishness. I don't know . . . We always figured it was just likker talk."

"Tom had a mine he called the 'Dark Secret'," put in Fred Green. "The shaft's about a mile below our camp. The arrastre where he crushed his ore is still there, too; but the rock cabin where he lived is mostly in ruins."

"Look," Fred continued. "I'm going over to the canyon tonight to see my partners, Oscar and Ray Williams. If

you want a story about Tule and can spare a couple of days, why don't you come along? We'll see that you get plenty to eat and a shack to sleep in, and tomorrow we'll take the jeep and explore the canyon from one end to the other. What do you say?"

Thirty minutes later we had taken our leave of Harry Wiley and the sheriff, and my car was bumping across the Nevada desert in the wake of Fred Green's jeep.

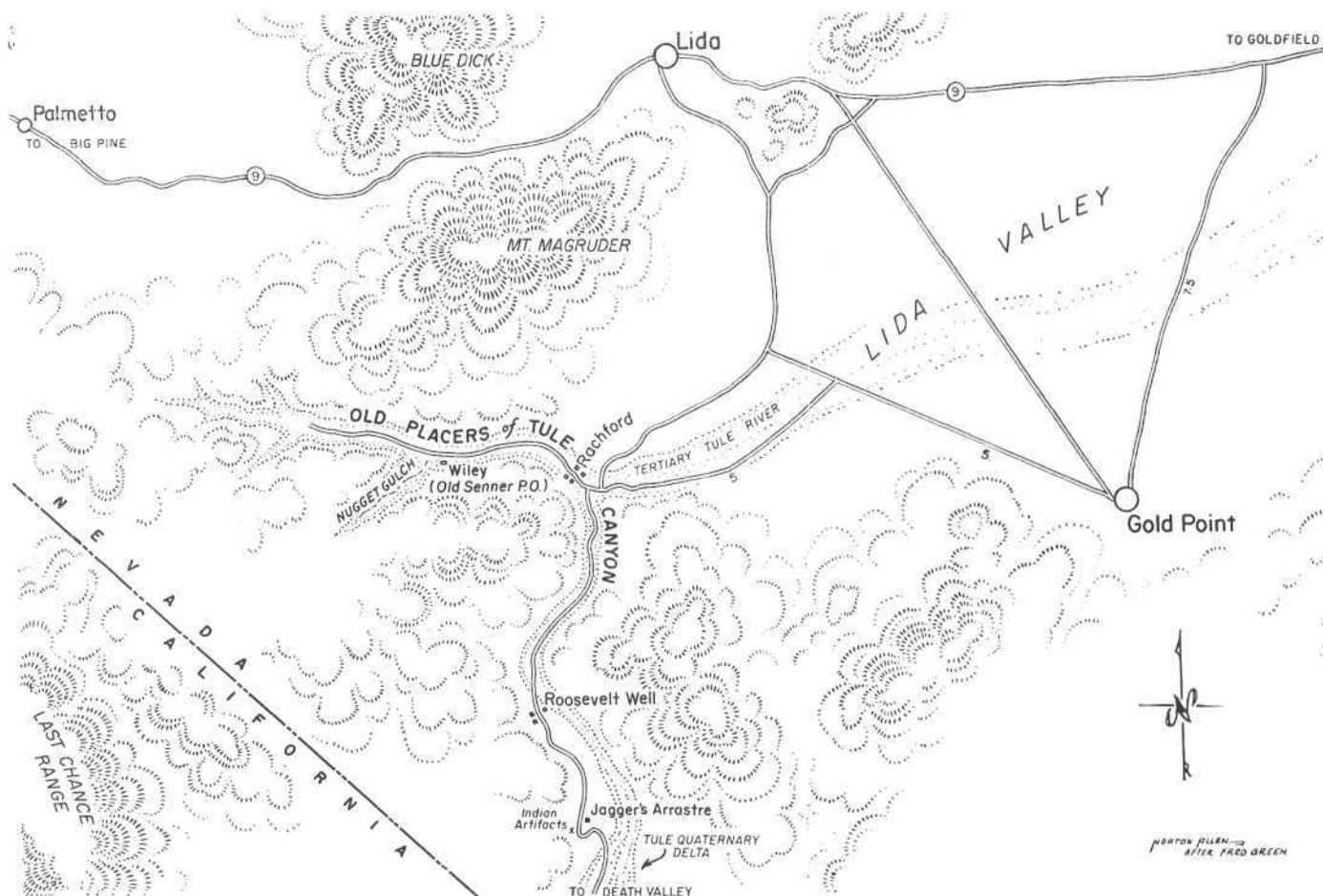
From Goldpoint, our road dropped down the mountainside to the wide, semi-barrenness of Lida Valley. After boring into the west for 10 miles, we came to the brink of a rocky ravine, nosed down its side in a short, steep pitch, and turned into the sandy wash that floored the cut from wall to wall.

This was Tule Canyon. Here were old mine workings without end — mountainous piles of tailings and scattered prospect holes, an occasional hillside tunnel; now and then a long-abandoned dug-out, or the tumbled ruins of an old stone cabin. Even from the moving car it was obvious that a great deal of mining activity had been carried on here over a long period of years—a span which possibly bridged completely the West's great saga of gold.

Five miles down the wash, Fred's jeep came to a halt at Roosevelt Well, an unfailing source of water named half a century ago when Rough Rider Teddy was prominent in the nation's news. Turning industriously in the up-canyon draft, a windmill sent its spurning stream of water through a two-inch pipe into a wooden tank, the overflow of which was quickly reclaimed by the thirsty sands of the wash.

On a low bench to the southwest stood a group of wooden shacks and the ruins of a mill—remnants of a small mining camp that was established here years ago by Harry Stimler, one of two partners who made the original strike at Goldfield. Unlike the Goldfield development, Stimler's efforts at Roosevelt were not marked by any great success and the camp was short-lived. About five years ago, its abandoned buildings had become the headquarters of Fred Green and the Williams brothers, a pair of veteran desert miners from the vicinity of Florence, Arizona.

Our unexpected arrival in camp found the Williams boys already at supper; and of all strange sights to encounter in an all-bachelor mining camp, they were eating on a green-and-white checked tablecloth, spotlessly clean and beautifully ironed! Extra places were quickly laid for Fred and me, and Oscar's good cooking found a ready market.



By the time we had finished supper, dusk was creeping down the canyon. Every pocket and ravine in the Slate range to the east held its dark pool of shadows. Ten miles to the west, the 9400-foot summit of Last Chance range was silhouetted blackly against the lingering flame of sunset. Ubehebe crater loomed as a dark blotch on the mountainside, a little way to the south; and beyond, lay all the terrifying majesty of Death Valley—now peaceful and mysterious in the soft glow of the rising moon.

During the two days that followed, mining activities came to a halt while Fred and the Williams boys introduced me to the canyon.

As Harry Wiley had said, the early history of Tule is largely lost; and when, or by whom, its gold deposits were first discovered is something that no man seems to know. The government-sponsored Wheeler Survey of 1871 reported only two men then working "in the once-famous Tule Canyon;" the inference being that this period of fame had occurred many years previously.

While examining an old open-cut operation, the Williams boys recently made an interesting discovery having possible bearing on some of the canyon's earliest activities. Near the center of this cut, in an area the size of

a dinner plate, lay ten Indian artifacts, eight of which would seem to have no other use than as possible digging or scraping tools. All expertly chipped, they are flatly-oval in shape, and about three by five inches in breadth. The

two remaining relics consisted of a broken spearhead and a long pointed pebble, with man-made grooves encircling either end. Over the entire collection lay a light accumulation of earth, possibly blown there by the

Indian artifacts found in ancient mine workings at Tule canyon. The tools, evidently used for digging or scraping, indicate early exploitation of the area's resources.



wind, or caved down from the bank above.

If these pieces actually were used in mining—as their presence in the cut would seem to indicate—then Tule's production must have had its beginning during prehistoric Stone Age times.

Traveling up-canyon in the jeep, our first stop was at Rachford (or Radford) Spring, one of the area's more famous landmarks. Pouring into an ancient barrel from a two-inch pipe, an endless stream of cold sparkling water overflows the container, spreads across a few square yards of ground, and is greedily absorbed by the wash. Watercress and other tender plants carpet the oasis; and a thicket of willows, grown up around the spring, provides cool haven for a galaxy of birds and four-footed creatures of the desert night.

East of the spring stands a dilapidated wooden barn and a small stone cabin—all that remains of the one-time way station known as Rachford's.

Tule Canyon never had a business district of any great extent, but for quite a few years it supported a school, and postoffice and at least one store—this establishment changing location as it changed ownership. At one period in the canyon's history, it seemed, this center of commercialism had been at Rachford's. At a still earlier time, when the store had been owned by "Dutch Chris" Senner, both town and postoffice went by his name.

Although the Senner postoffice was officially established by Uncle Sam, and all the forms and supplies necessary to its operation were sent, no contract was ever let for mail delivery between that isolated office and the outside world.

As a result of this never-corrected oversight, patrons of the Senner postoffice received their mail only when some public-spirited citizen volunteered his free service as a mail carrier. For years this was done regularly, according to Douglas Robinson of Bishop, California. Mr. Robinson, whose father owned and operated the Senner store from 1891 until 1897, recalls making scores of horseback trips to meet the mail stage at Palmetto, and later at Lida.

Leaving Rachford's, we continued to climb through the canyon, making our way between great heaps of placer tailings and past the ruins of old stone and log cabins, and rock foundations. For the most part they were virtually obliterated, both time and cloudbursts having claimed heavy toll.

One of the more extensive stone ruins, according to local legend, was

formerly a Chinese hotel. With completion of the Pacific Railroad in 1869, Chinese laborers had fanned out over Nevada and into every mining camp whose occupants would tolerate their presence. Some of these wandering Celestials had found their way to Tule.

"When the Robinsons came to Tule in the early '90s," said Fred, "there were 45 or 50 Chinese living in the canyon. According to Doug, they were natural placer miners. They never worked virgin ground—probably never were permitted that advantage. Instead, they bought worked-out and abandoned claims from the whites; and even in such unpromising ground, they occasionally hit rich pockets. One claim, that had been mined and re-mined by the whites, was purchased by a Chinese named Sing Kee. In only a few weeks time he had taken out \$1400!

"They stayed much to themselves," Doug says. "Even had their own stores and observed their own national holidays. On Chinese New Year they always celebrated with firecrackers and a big feast. They cooked on oven-like stoves, made of baked mud; and when they decided to move they traveled light, packing all their belongings in two baskets suspended from a pole carried on their shoulders."

Continuing through the canyon, our route never strayed far from the old "Piper Toll Road," built in the early 1870's by Sam Piper, pioneer rancher of Fish Lake Valley. In the peaceful loneliness of that summer morning, it was difficult to visualize this rutted, brush-grown trail, as a one-time artery of commerce linking the busy mining centers of Palmetto, Tule Canyon, and Gold Mountain. Long-line teams and ponderous freight wagons; shouting, swearing 'skinners, and toll gates and activity, all belonged to a period far too remote to be readily recaptured.

Turning off the road, Fred sent the jeep down a rough side trail leading to a tar-papered cabin on the mining claim of Harry Wiley. Operating a dry-washer in the front yard was a middle-aged man whom my host introduced as Harold Strom—a former engraver and printer who had long before exchanged his city job for a gold-pan and pick.

"As you can see," said Fred, "he hasn't missed many meals! Nell's writing a story about Tule Canyon," he went on to explain. "I told her you'd show her where Marajilda got his big nugget."

Only a few rods southwest of the cabin, Harold led us into the mouth of Big Nugget Gulch, a sharply-inclined ravine in the canyon's south wall. As we scrambled up the rocky bottom of

the gulch toward the top of the ridge, I could see that nearly every foot of the way was marked by signs of past mining activity — prospect holes and small tailing piles, broken shovels and square-cut nails and fragments of desert-purple glass.

Just before topping the skyline, Harold halted at a spot quite similar to a dozen spots passed previously, and said it was here that the old Mexican miner had found his famous \$900 nugget.

"From what I've heard, this Marajilda must have been quite a miner," said Fred. "He worked in Tule Canyon through the 1870s and '80s, generally selling his gold at the Harris & Rhine store in Independence, California. This \$900 piece was cashed there in 1873."

About 60 years ago, according to my informants, Old Marajilda came to an unhappy end.

The winter of 1889-90 was extremely severe in Tule Canyon, which lies between 3500 and 7000 feet elevation. After many days of sub-zero temperatures and deep snows, not even pack trains could get through the mountains to outlying camps; and Marajilda became one of many miners whose food supply was eventually exhausted.

Floundering through the mountainous snowdrifts, the old man finally had made his way over the range to Lida. There he reprovisioned and began the return trip to Tule, carrying on his back a 50-pound sack of flour and assorted groceries. By the time he reached the junction of Water Canyon and Tule, he was close to exhaustion, and sat down for a rest.

Several days later a passing party of miners found him still sitting there, frozen to death. With great difficulty a grave was chipped from the frozen ground and the dead man lowered into it in a sitting position, the body being frozen too rigidly to be straightened.

Back at the cabin Harold reached into a secret repository and brought forth two containers, one of them holding several ounces of coarse gold. In the other lay six magnificent nuggets, the largest a beautifully-shaped buttery-yellow piece worth more than \$80! The entire lot, he said, had been recovered by him in recent months using a dry-washer and working within a few hundred yards of the Wiley cabin.

To forestall any ill-advised gold-rush it should be mentioned that, despite the evidence of Harold's success, Tule Canyon is no longer the answer to a wandering prospector's dream. Every foot of ground in the area is already claimed; and, even if open ground were available, it still takes a vast amount

of patience and know-how to reap a living from a dry-washer. Particularly from ground which has been mined and re-mined by succeeding generation of resourceful and determined men.

All logical and geological reasoning seems to indicate that the bulk of Tule's remaining wealth is not contained in her tributary gulches, but in her great central trough and adjacent deltas, where wash sands and gravel have been deposited to considerable depths.

To the Williams boys and Fred Green, who control most of the ground in the canyon and nearby valleys, as well as the main water rights, Tule has never appeared as a poor man's paradise, but as a dredging prospect seemed to hold definite promise. Today, after five years devoted to preliminary testing and development work, the partners are more than ever convinced that this is the only answer to the canyon's successful exploitation.

In the dredging method of operation, the combined mining and recov-

ery process is built into a floating unit that moves its pond by excavating from the front side and refilling the rear. By utilizing both the canyon's considerable sub-surface flow and the issue from all available springs, Fred and the Williamses feel confident that sufficient water may be impounded in the canyon to float a dredge of 6000-yards-daily capacity. By working the ground on this scale, they believe that the vast yardage of low-pay near-surface gravel may be handled cheaply enough to enable a profitable working of the material from 10 to 15 feet above bedrock, in which is generally concentrated the bulk of the gold and water.

While Tule's entire background is based on gold, the possibility of recovering other values is not being overlooked, Oscar Williams pointed out. The Tule area is known to contain certain useful and rare earth elements that may be added to its productive possibilities.

"As some of these minerals are of strategic importance," Oscar added, "we are hopeful that our gold mining

project will also make its contribution toward the nation's defense."

So there you have the story of famous old Tule Canyon—a story still incomplete, both in its beginning and ending.

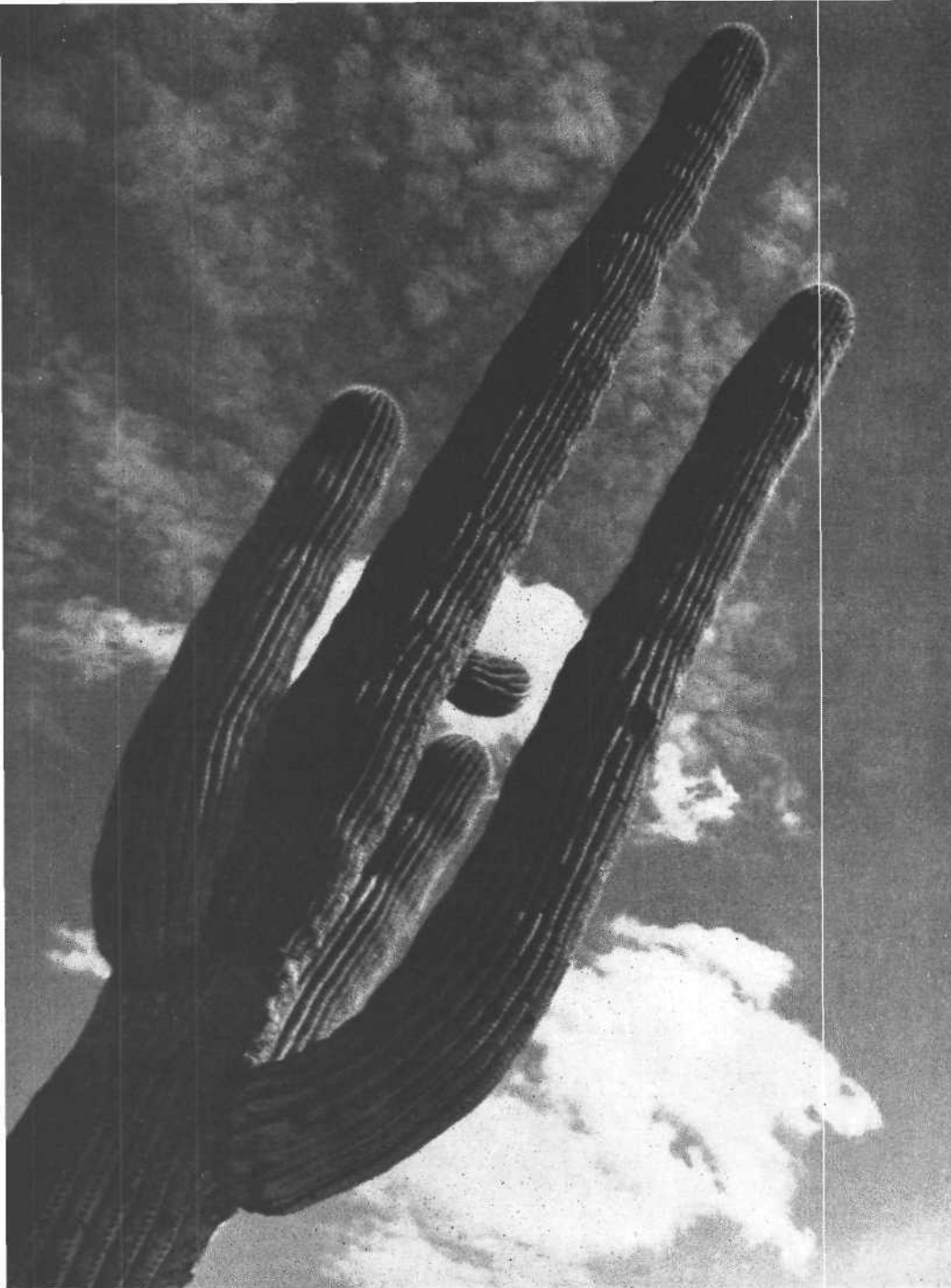
After three days spent with Fred and the Williams boys, I bade them goodbye and headed my car back up the wash toward Goldpoint and home.

Driving past the great mounds of tailings and tumbled ruins, the abandoned shafts and tunnels and brush-grown trails, it was impossible not to realize that men's hopes have a persistent way of slipping their halters. On the other hand, every great mining camp the world has ever known, once was only that shimmering stuff of which dreams are made.

As I halted on the rim of the canyon for one last look down its sinuous length, I knew that if the vision and faith and plain sweat-and-blood labor of three desert miners can swing it, this rocky old treasure chest on the lip of Death Valley will one day find itself coming back in a rousing Twentieth century encore.

Big Nugget Gulch, tributary of Tule Canyon, where much placer mining has been done, as evidenced by the gravel dumps on the hillside.





Photograph by Josef Muench

THE PROSPECTOR

By E. A. BRINSTOOL
Los Angeles, California

My cabin walls are rough and rude,
My bed is hard; my fare is coarse,
And yet I love this solitude,
And every stream, from mouth to source.

All day I delve for hidden gold,
The object of my heart's desire.
And when the day is growing old,
I smoke beside my friendly fire.

And, basking in its cheery blaze,
I watch the leaping flames, and dream
Of old-time friends, and other days,
When eyes of love in mine did gleam.

Within the firelight's ruddy cheer,
The voices of the night are all
The sounds which greet my tired ear,
Or penetrate my cabin wall.

And when I seek my humble bed,
And wrapped in gentle slumber lie,
The night-winds sing about my head
Their low-crooned, soothing lullaby.

I'm monarch of this lonely wld!
I bow the knee to God alone!
To these vast deeps I'm reconciled—
The mountains are my kingly throne!

• • •

CHRISTMAS SPIRIT

By MARGARET BALLOUGH
Albion, Michigan

Across the night of Human Will
God caused His Star to glow—
Bequest to earth His, "Peace, be still . . ."
For all the world to know.
'Twas then in form of Babe so small,
His Word on earth to teach,
That humanly, to touch us all,
Christ came within our reach.
How right, in form of Child so Pure
That God should send His Truth
To earth in heart unfettered, sure
Of welcome for this Youth
Sublime in Spirit. From that hour
Of understanding, Truth and Right,
(Reflecting His Divine Power),
Grew. Then—out of darkness—Light!

Sentinels of the Desert

(To the Giant Cactus)
By ETHEL MICHELLE
Phoenix, Arizona

Tall and straight on burning sand
Sentinels of the desert stand;
With arms upraised and heads unbent,
Reaching toward the firmament,
They rise in attitude of prayer
And humbly ask the Father there
For guidance in their vast command
O'er all that grows on desert land.

God made them tall so they could see
Afar out o'er His Monarchy;
He gave them arms to safely hold
All desert life within their fold.
Not time nor wind nor sun imparts
A faltering within their hearts;
They know their duties to perform
In face of elements and storm.

Stately, staunch, on burning sand,
Sentinels of the desert stand
Undaunted in their destiny
To lead their kind by God's decree;
Faithful to their high estate,
They stand in humbleness and wait
For outstretched arms that seek their
own
For guidance through the Great
Unknown.

CHRISTMAS ON THE RANGE

By THELMA BLACK
Whittier, California

There's never the sound of Christmas bells,
Nor the gleam of new fallen snow.
The only chimes are jingling spurs
Or cowbells far and low,
And a glistening flat of alkali
Spreading beneath the sun,
The snow of the range white and clean,
Unnoticed and unsung.

But no where else is the Star so close
Or mirage so clear in the night
Of camels and their riders three
Facing the beckoning light.
A cactus may be a Christmas tree,
To some it may look strange
And reindeers may be wild mustangs
When it's Christmas on the range.

DESERT SMOKE

By ORA LEE PARTHESIUS
Salt Lake City, Utah

I saw a violet puff of smoke
Swirl in the bright dry air
And hurried along the sandy wash—
To find no dwelling there,

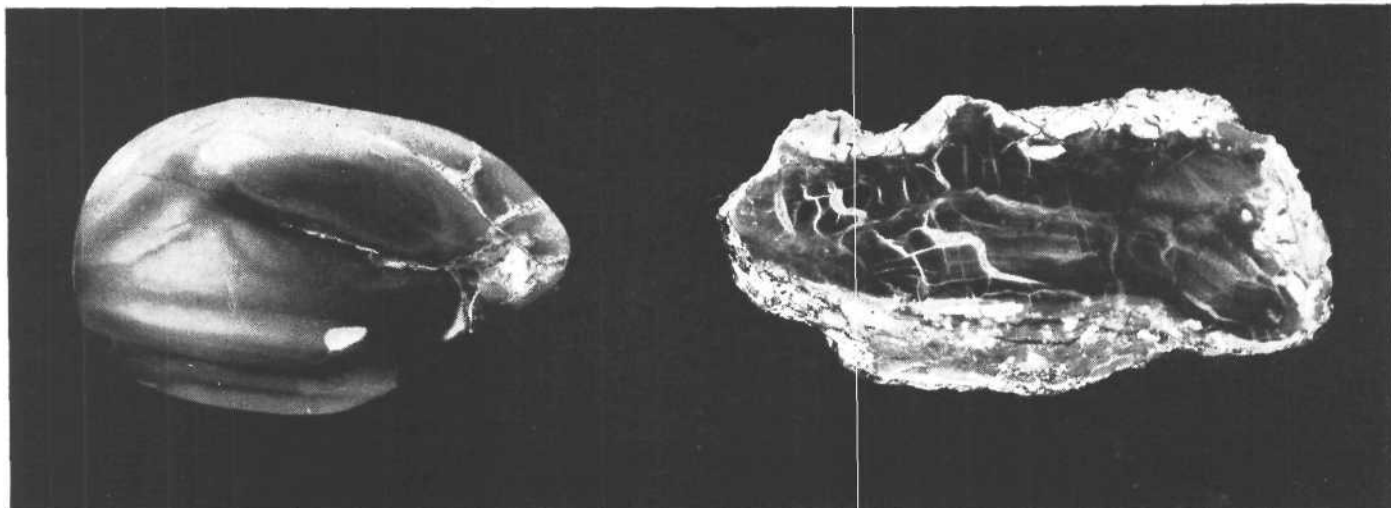
Only grey growing in the sand,
Its branching dignity
Softened with purple flowering—
Smoke shaped to a living tree.

Perhaps a pioneer cabin's fire
Kindled by faith's warm glow,
Left its pungent purple smoke
Behind to root and grow.

Purpose

By TANYA SOUTH

There is purpose for our sorrow,
There is purpose for each tear
That we weep, for thus we borrow
Strength to overcome our fear,
Faith to lean on Higher Powers,
Love to kindle for the rest,
Truth to light our darkest hours,
And the will to do our best.



Two specimens of the material from Opalite hill. That on the left is cut from one of the small nodules and is orange-red, white and taffy in color. The piece on the right might at first be mistaken for opal wood—brown shades with white in the brecciated area.

Opalite on the Road to Cibola

In the Arizona valley of Cibola rises a gently-sloping hill generously sprinkled with opalite. Lucile Weight had glimpsed the opal field and determined to return for thorough exploration. Her husband writes of their trip and tells the history of a now-dead desert town.

By HAROLD O. WEIGHT

Photographs by the author

Map by Norton Allen

AT LAST I have visited Cibola. Not, of course, the fabulous seven golden cities of Cibola for which Francisco Vasquez de Coronado searched in 1540—those cities of Cibola turned out to be the mud and stone pueblos of the Zuni. This Cibola which I visited is a valley along the lush bottomlands of the Colorado river in Arizona.

Once it had a city—or at least a village—of Cibola, too. In fact, you'll find it marked on most current road maps—a neat round circle at the end of an unimproved dirt road. According to the mapmakers, that circle indicates a population of "under 1000." Well, as far back as 1920, Cibola had only 19 residents. Today there is only a scattering of ranchers and river fishing camps in the valley, and the visitor who depends upon supplies and accommodations at the "town" of Cibola will be doing well if he can determine even where the town once stood.

Arizona's Cibola had fascinated me since I first saw the name on a map. Why should this spot on the Colorado, about 45 air-miles north of Yuma and 20 south of Blythe, have been named for the legendary land that brought the first large European expedition into the Southwest? Who had attempted to

establish a town in that wild land, more than half a century ago, and why? What had happened to this dream of Cibola?

Lucile also had a special interest in this portion of Arizona. In November, 1946, she had made a field trip into the nearby Chocolate Mountains, with the Imperial Valley Gem and Mineral society, hunting chalcedony roses. Because of the rough trail into the collecting field, the rockhunters had headed north when leaving it. Just before they reached the Cibola road, they had come upon a little hill generously sprinkled with colorful, high-grade opalite. There had been little time to explore the field, and ever since, Lucile had wanted to return.

So, in April, with Eva Wilson, who also had been on the original field trip, we left El Centro, crossed the dunes and the river to Yuma, and headed north on the Quartzsite highway. Although Cibola is less than 50 miles from Yuma on a direct line, it is nearly 100 miles by road. In fact, in the early days, the accepted route from Yuma was across the river into California, up to Picacho, then across again by ferry.

On Highway 95, 56.4 miles from Yuma, we passed the historic Stone

Cabin on the west. This stone ruin has been a landmark for travelers since the first settlers came through, and no one knows when it was built or by whom. Bill Keiser, of Quartzsite, believes it was constructed by forgotten French miners who long ago worked lead-silver deposits near the Colorado. On this trip we found that a service station had been built at Stone Cabin since we had last been that way.

The turnoff to Cibola valley lies 5.4 miles north of Stone Cabin, .2 of a mile beyond one of the danger signs erected by the Army to warn of possible unexploded shells left from the training days of World War II. At the time we were there last, the only marking on the turnoff was a "Jim's Boat Landing" sign. We turned left on the dirt road and followed it up the bajada, across the old dirt Yuma-Quartzsite road, and to the base of the South Trigo Peaks. Just before reaching them we crossed the worst bit of trail on the entire trip—a little "sink" area which is deep, soft dust when dry and which would be impossible when wet.

As it reaches the ragged buttes at the base of the Peaks, the road swings sharply to the right. We took a little travelled trail which swung as sharply to the left, and which circles a small butte close to the road. This butte carries the opalite on its northwestern sides, but those who wish to camp in the area should continue, as we did, around the butte. On its south and west are innumerable campsites, as perfect as any that will be found on the desert. The whole area is firmly paved with small, dark, desert-var-



The author and Mrs. Weight inspect a huge piece of opal, fallen from a ledge and too large to carry away.

nished rocks over which a car can be driven almost anywhere. Spotted over the paving are lines and clumps of saguaro, palo verde, ironwood, ocotillo, creosote, Bigelow and deerhorn cholla. And there is plenty of dead wood scattered everywhere. It is quite a populated area, too—we found the nests of many packrats in untidy, cholla-protected heaps among the vegetation, and the neat holes of the woodpeckers—some of them usurped by elf owls—in the saguaros.

It was almost dusk when we arrived, and we did no rockhunting that night. But a great moon—one of those desert moons by whose light it literally is possible to read newsprint—made the setting up of camp an easy job. And our late dinner—eaten at nine p.m.—was enjoyed by the combined light of the moon and a campfire of ironwood and dead palo verde.

We sat late around the fire. It was too beautiful a night to waste in sleeping. The magnificent, park-like land was visible for a great distance under the moonlight. The harsh mountains were softened by black pockets of shadow. The dark pavement glittered. The palo verdes, ironwoods and saguaros—all in bloom—were the vegetation of another world.

And the temperature was ideal. When at last we went to bed, we slept between blankets while occasional gentle breezes kept the air in motion. The heat of the day was forgotten. Even it had not been too bad—certainly a small price to pay for the wonderful display of flowering shrubs and trees that we had seen.

Early in the morning we started our rockhunt, and almost immediately we found the opalite. I call it opalite for want of a better name—but it most closely resembled the pastelite of the Black Hills of Imperial county, California. The patterns are less striking—but there is a greater variety of colors, and the mixture of colors and the quality is equal to that of the pastelite. The predominating shades are rose and pinks in varying intensities, some reaching red. But we also found specimens of white, dark translucent, flesh tints and pale orange.

The opalite hill is comparatively small, and the other buttes in the immediate vicinity, which we checked, did not seem to carry any of the same material. However, it is quite abundant on the one hill, and still more can be dug out when the surface float is exhausted. It occurs in two distinct

forms—chunks that may come from ledges, and peculiar reddish-coated nodules which are flatish or built up into conical (and comical!) little domes. The nodules range upward from two inches to about a foot. They offer the finest, most waxy and unusual cutting material. But the chunks offer more variety in pattern and may be obtained in larger pieces. One we dug out was too large to carry to the pickup, so we left it for a more ambitious collector.

With a wide variety of specimens, we broke camp before noon and headed for Cibola. In less than half a mile, we came upon a blooming saguaro beside the trail which offered an urgent photographic challenge. None of us, at that time, had taken any real closeups of the giant cactus blooms. Here I could pull the truck right up beneath one fine blossom, and we could practically shoot down its throat, using the back of the truck as a camera perch. After we had taken turns saying "Look pleasant, please," which the creamy blossom did, and Lucile had counted 49 buds besides the single bloom, we continued.

The trail to Cibola, in this season, proved an unforgettable Sonoran desert trip, as the road wound through the ragged volcanic buttes, across broad washes, and always among colorful blooming trees and shrubs. At last we came out into the great river valley. Below we could see the giant silver snake of the Colorado, looping through the cottonwoods and mesquites. Across, on the California shore, we could pick out the familiar shapes of the Palo Verdes, the Mule Mountains, Double Butte, the Chuckawallas and the Black Hills—all familiar rock-hunting grounds. All the way down we had been following the "Jim's Boat Landing" signs. Now, not far above the river, we came to a main divide. The right branch headed up the river to come out, finally, on Highway 60 and 70, east of Ehrenberg. This was

TRIGO OPALITE ROAD LOG

- 00.0 Turn west from Highway 95 onto dirt Cibola Lake road. Turnoff is 61.6 miles north of Yuma (5.4 miles north of Stone Cabin station) and 22.5 miles south of Quartzsite.
- 00.8 Cross dirt road and continue west.
- 03.4 Short stretch of dust and chuckholes, bad in wet weather.
- 04.2 Turn left from Cibola road on faint tracks which follow south and west around base of reddish butte. Opalite will be found on north and west sides of this butte; good desert pavement camping areas on west of it.

the road most frequently used by Cibola valley inhabitants, as Blythe, California, is their postoffice and nearest trading center. We took the left road, continuing down the valley.

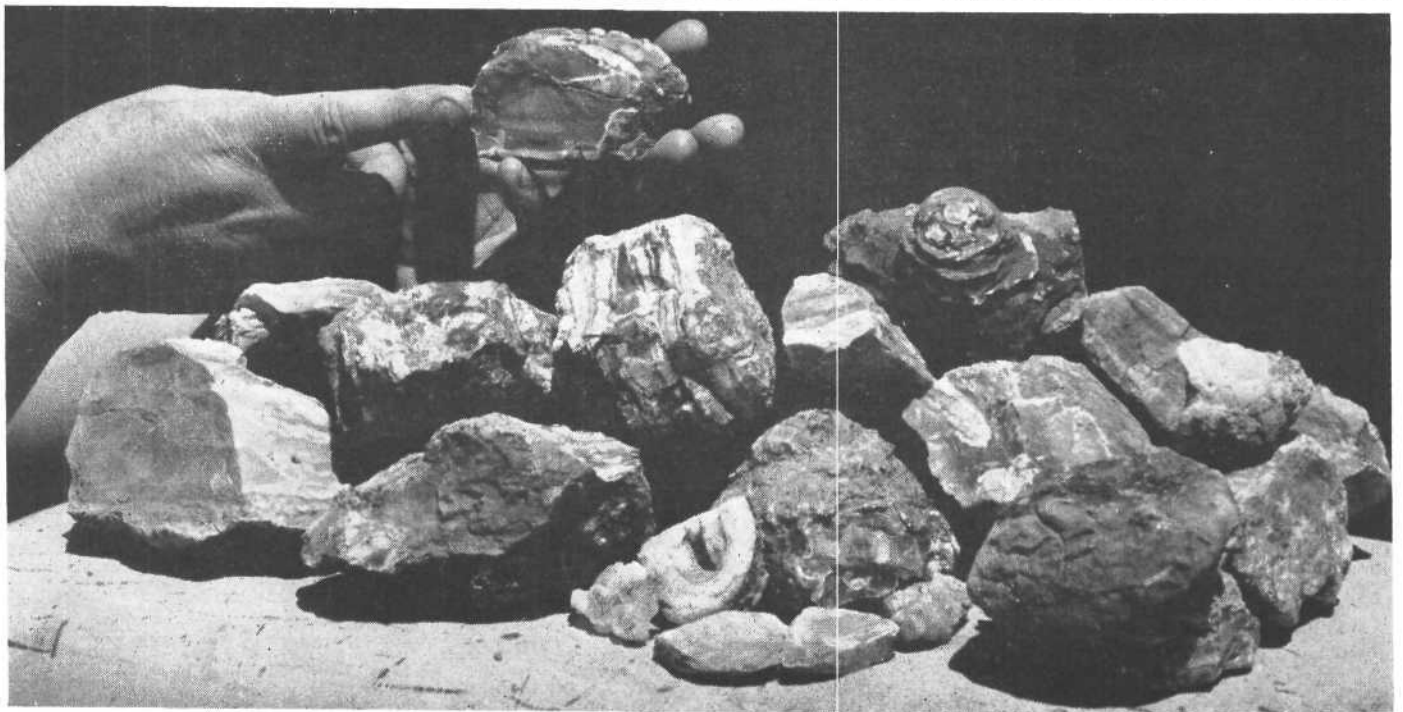
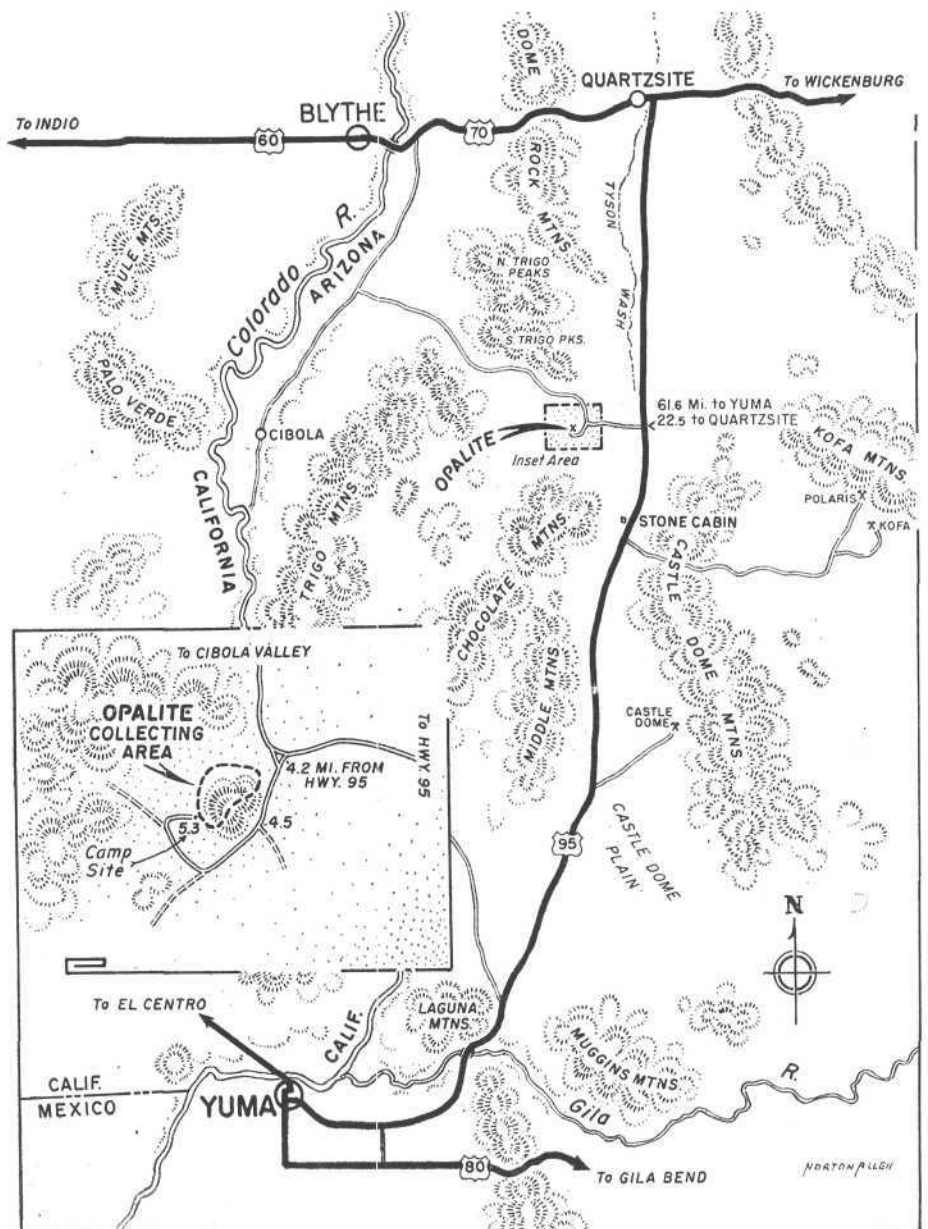
About 10 miles farther we crossed familiar-appearing gravel and pebble mesas. Stopping to check, we found that these, indeed, were Colorado river deposits and that bits of chalcedony, jasper, agate, chert and petrified wood may be found in the gravels.

Never having been to Cibola before, we did not know what to expect, whether the town still existed, whether the valley was under cultivation. The answer soon came, as we passed numerous collapsed houses, ramadas, and foundations. At last, seeing a windmill and hearing the sound of a pump, we left the main road and headed right, toward the river and evidences of habitation. At the pump, we met R. H. (Bob) Bishop.

Bob could tell us about Cibola. He had been there—had lived in the valley—since 1899. His father and older brother had come in 1898, at the beginning of the Cibola boom, by wagon from San Diego across Imperial Valley—"It was nothing but desert then." They had started right away, with other settlers, to build a canal to bring water into the valley which would irrigate crops.

Later, I found an old newspaper account of the attempt to make Cibola valley bloom. The story which ap-

Some of the variety of opal-rock, which equals in quality and is similar in appearance to the pastelite of Imperial county.



peared in the *Yuma Sun* in 1899, makes interesting reading today.

"Cibola valley — so called by the original projectors of the enterprise now nearing consummation, after the name of the Zuni villages of the sixteenth century—contains 20,000 acres of as fertile irrigable land as there is under the sun, 5000 acres susceptible to annual overflow from the silt-laden Colorado, and 5000 acres too high to be watered by gravity, making 30,000 acres in all, the major portion of which will very soon blossom under the influence of the application of water and all of which will at no distant day feel the skill of the farmer's hand."

So said the *Sun* half a century ago. It also declared that the canal which would bring water to this garden-to-be, a canal 16 miles long, 12 feet wide at the bottom and four feet deep, on the irrigable land, was nearly half completed. Within a matter of months,

there would be "water flowing the length of the valley, seeds and trees springing into life and prosperous homes inaugurated." It later specified that two miles of the canal was actually complete.

The colonization scheme was originated, according to the account, by Judge George U. Holcomb and C. O. McCarroll. Others listed as incorporators of the Cibola Canal company—capitalized at \$25,000 which had been divided into 500 shares with \$50 par value — were M. Morris and E. G. Morris. Pool, Ferguson, Baker, Jacobs and Draper were stockholders who had settled in the valley.

Bob Bishop had little to say about what happened to that splendid irrigation scheme or why the canal had not been completed. But the dream of agriculture is gone and today one-third of the valley—the low portion which

would have and did produce good crops—is "just a swamp behind Imperial dam." And part of it is Cibola Lake, where patrons of Jim's Boat Landing, farther down the river, go fishing.

Today Bob Bishop runs cattle and raises bees. These are still—and always have been the most successful crops of Cibola Valley. He told us about the especially fine white mesquite honey which his bees produce. Bert Hart, of Quartzsite, who also owns a ranch in Cibola Valley, told us that when he first came—when his mother ran a way station with food and lodging for travelers between Picacho and Ehrenberg—there were never less than 3000 head of cattle in the valley.

As the population of the valley shrank, the troubles of the remaining inhabitants increased. "First they stopped the mail service," Bob told us, "and we have to go into Blythe for that. But we mark our mail address Cibola, Arizona, via General Delivery, Blythe. We put that Arizona on for we don't feel so friendly toward California over here.

"Then they cut us off on elections and we've had to go into Quartzsite to vote. Now, however, they say we can vote by absentee ballot."

Bob and a number of other Arizonans also let us know that the correct pronunciation of the name is Si-BO-la and not SEE-bo-la, as Coronado's cities are pronounced.

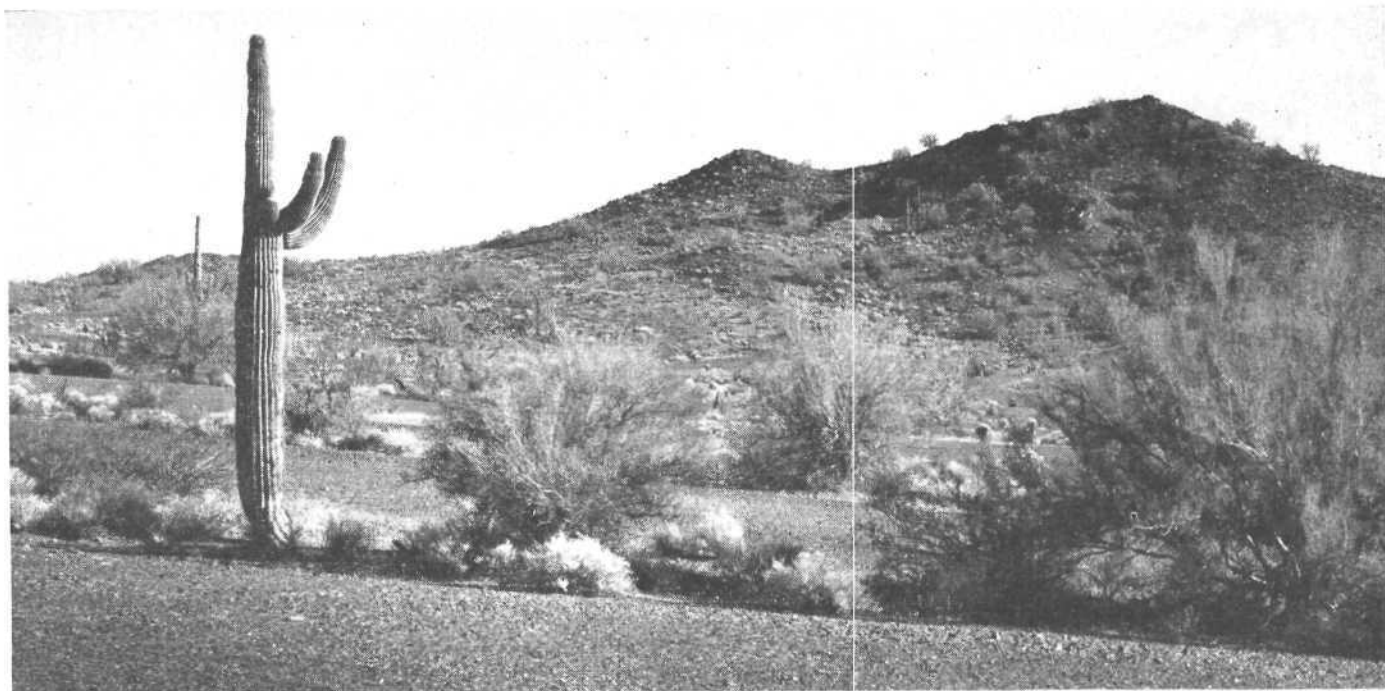
Looking at the long picture of history, it is rather odd that this spot on the Colorado river should finally be named Cibola. Because more than 400 years ago a Spaniard came up the Colorado river—if not to this spot, at least nearly to it—looking for Cibola. His name was Hernando de Alarcón, and his expedition reveals the utter misconception of Western geography from which the Spaniards suffered at that time.

For Alarcón's job was to bring supplies to Coronado by sea. In fact, all the heavy supplies, additional armor and arms, much food and other items—including packages from Coronado's wife — were loaded aboard Alarcón's three ships, the *San Pedro*, *San Gabriel* and *Santa Catalina*, with the notion that they could be shipped up the coast and delivered either directly to Coronado at Cibola, or at least be brought close to that fabulous province. Actually, of course, the farther Alarcón and Coronado went, the farther apart they were, and Coronado never did receive his supplies.

But Alarcón made a bold and courageous effort to fulfill his orders. He sailed up the Gulf of California and past the shoals where others had turned

Bob Bishop, who has lived in Cibola valley for more than 50 years. The slot in the door identifies this building, now become a cowboy's shack, as the former Cibola postoffice.





Above—Opalite Hill, seen from the southwest. The colorful opalite specimen and cutting material is found on the slope (left) and on the other side of the hill. Below—Camp close to the foot of Opalite Hill. The sharp volcanic buttes in the background are an extension of the South Trigo Peaks.

back. His ships became stranded on the sands where the great tidal bore in the gulf caught him. "The currents were so strong that it was impossible to approach one another," he wrote in his official report. "We were in such danger that many times the deck of the flagship was under water. Had it not been for a miraculous rise of the tide that raised the ship, we should all have drowned." But when the tides floated his ships again instead of turning back to safety, Alarcón pushed on and entered the channel of the Colorado.

How far he went, we do not know. We know he passed Yuma for there he heard stories from the Indians of Coronado's advance far to the east. We know he took a small boat and traveled many leagues farther up the Colorado.

So perhaps Alarcón actually reached Cibola—Arizona's Cibola—and did not know it. It is an interesting thought. And perhaps—although the dream of an agricultural wonderland vanished—those like Bob Bishop, who have spent their lives in Cibola Valley found as much of a promised land there as the

others of us have elsewhere in more prosaically named towns and cities.

It is a strange land, and beautiful, this part of western Arizona, with its thousands of blooming trees in the spring, its ruggedly colorful volcanic mountains shouldering the deep blue sky, its great slow river winding from the Grand Canyon to the Gulf. I'm sure that those who come to hunt rocks in it, to photograph it, or just to travel its desert trails will be more satisfied with this Cibola than Coronado was when he reached the pueblos of the Zuni.



In the first days of school it is necessary for the teacher to use an interpreter because many of the young Navajos do not speak English. They are apt pupils, these Navajo youngsters, and many of them have a natural talent for art. They make excellent teachers, artisans and farmers.

Forgotten Children of the Great White Father

By LOUISE GERDTS

Photographs by Joern Gerdts

There are 25,000 children on the Navajo reservation — and schools for only 8,000. Uncle Sam is trying to correct this situation and at Brigham City, Utah, the Indian Service last year acquired the great wartime Bushnell hospital plant, and has converted its 100 buildings into housing and classrooms for 2000 Indian children. Here is the story of the greatest project yet undertaken in the West for the education of the long-forgotten children of the Indians.

SHORTLY AFTER the summer holidays Melvin and Bessie Begay were packed off to boarding school, kit and caboodle. And whereas boarding school is exciting enough for the ordinary youngster, for these two it was equivalent to flying to the moon. For these were the children of a destitute family and their kit and caboodle consisted mostly of the clothes they were wearing. Further-

more, although Melvin was 16 years old and his sister 14, neither of them had been to school and neither could read nor write. In fact, neither Melvin nor Bessie could even speak English although their ancestors had preceded the Mayflower by several centuries. For this brother and sister were an average Navajo Indian boy and girl.

The boarding school that Bessie and Melvin are attending is the new Inter-

mountain Indian School, 500 miles away from their desert reservation home, at Brigham City, Utah. An ex-GI, the school was formerly the Army's huge Bushnell hospital for amputee and psychiatric patients. All set to be sold "for one dollar," Dr. George Boyce, Director of Navajo Education, and Utah Senator Watkins convinced Congress that Bushnell should be transferred to the Indian Service. In the spring of 1949 the bill was passed, and since then the naked hospital wards and surgery rooms of this Lilliputian city have been transformed into homey un-institutional dorms, colorful modern classrooms, vocational shops, recreation rooms, dining halls and kitchen.

In January, 1950, with Dr. Boyce at the helm as superintendent, the Intermountain Indian School threw open its doors, and at present 1300 Navajo boys and girls between the ages of 12 and 18 are enrolled there. The transition of these teen-agers from a primitive existence and their adjustment to the most modern of school and living systems is an amazing testimonial to the adaptability of the human species.

There are many thousands of children on the Navajo reservation eager to go to school and yet denied the privilege. For the Navajos it has been a long-accepted fact. In 1864 Kit Carson rounded up the marauding Navajos with U. S. Army troops, marched them and their families off to the stockade at Ft. Sumner, New Mexico, and four years later the United States government and the Navajo tribe entered into the Treaty of 1868. It was agreed that if the Indians would stay on the reser-



Because of its isolation Navajoland has been easy to neglect. It's an incredible country of 16,000,000 acres pieced out of the rugged wildernesses of the adjoining states of Arizona, Utah and New Mexico. Yet, with a population of about one person to 2.1 square miles it is economically more overcrowded than the slums of any eastern industrial city. For this "land of enchantment" is also a land of fierce temperament, of flash floods and thirsty mesa, of wind and dust and rough river-carved canyons, of beautiful naked space.

vation, the government would provide a school house and teacher for every 30 Navajo children "in order to insure the civilization of the Indians."

Today, 83 years later, the Navajos have increased from 9000 to over 65,-

000, of which about 25,000 are school-age children. There are school seats for approximately 8000. Over 80 percent of the populace not only is illiterate but, like Melvin and Bessie, cannot speak English.

Out of funds made available by Congress for Indian purposes, \$3,750,000 was allotted to the Intermountain School at Brigham City. Formerly operated by the army as Bushnell hospital, the plant when remodeled

for school purposes will include dormitories for students, apartments for teachers, classrooms for 2000 pupils, medical clinic, gymnasium, tennis and handball courts and a huge swimming pool.





Recreational Advisor Harris and Principal Wilma Victor consult frequently with Dr. George Boyce, the Chief at the Inter-mountain school. Even though he's won a victory in getting this school, Dr. Boyce does not stop his fight for the Navajo. He feels that if Congress and the public should ever lose interest in this educational crusade the Navajo would truly become a lost people. Dr. Boyce would like to see six more such schools available for the Indian children of the Southwest.

In 1946 when the plight of the Navajo was widely publicized, public opinion demanded action. As a result, Secretary of the Interior Krug compiled an embarrassingly honest report and submitted it to Congress with specific recommendations for a long-term rehabilitation program. The Krug report revealed that three out of every 10 Navajo babies die before their first birthday; one in every 10 Navajos has active tuberculosis; that there were two dentists for the entire Reservation; that one in every six or seven children is orphaned by one or both parents; that the average family's annual income is \$400; that 100 miles of all-weather roads serve an area four times the size of Massachusetts; and that families like the Begays can expect nothing in the way of public community services which the rest of America takes for

granted: public health, water and sewage systems, roads, post offices, libraries, farm agents, enough schools—let alone such luxuries as buses, electricity, telephones, banks, drug stores, a toilet, a radio or an ice box.

On the brighter side, the Krug Report also showed that this undeveloped Navajoland holds a potential wealth in natural resources, such as coal, minerals, oil, uranium, vanadium, timber and unirrigated farm lands. But the greatest wealth lies in the human beings who are now going to waste.

In 1950 Congress passed an Indian bill, based on Krug's Report, for \$90,000,000—25 million of which was to be allotted for education. And that's why Melvin and Bessie Begay are going to school this year for the first time in their lives.

The fact that the Begays are attending a boarding school may seem a bit incongruous. But because the Navajo family must move often in search of waterholes and new range land for its animals, and because there are not enough buses or roads to take the children to a regular school, the boarding school is a practical necessity. The advantages of the boarding school are more than just keeping the students in regular attendance. It literally teaches Indian children how to live and how to conduct themselves in the society in which they must eventually take their places.

Living began for Melvin and Bessie Begay the day they arrived at Inter-mountain. It is difficult to imagine that this American boy and girl had never taken a shower, seen a movie or a

toilet, had a milkshake, used a fork, slept in a bed, or even eaten a piece of ham—which at first they thought was raw meat and refused to touch. Besides teaching them how to speak English and to read and write, Intermountain's teachers show them how to eat, how to take care of their clothes and personal grooming, how to use money, how to work—and how to play games and swim and have fun too.

The educational program itself is long-range, based on the success of a similar one carried out by the Indian boarding school at Riverside, California. The first two years are devoted to learning English; the third and fourth, to education and vocations; the fifth, to vocational training and personality guidance. It is at the end of the fifth year that Melvin and Bessie will be expected to make their adjustment into the outside world.

And whether we realize it or not, Dr. Boyce—Intermountain's energetic director—isn't just educating Melvin and Bessie Begay. He has already be-

gun educating white Americans here in the West in giving Navajo youth the same opportunity as other Americans enjoy. For opportunity, like the constitution and the Gettysburg address, has always been an integral part of our heritage. And he thinks it's high time we share it with our forgotten fellow-Americans, Melvin and Bessie Begay.

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EXTINCT VOLCANO MINED FOR CINDERS

A new type of mining project is being developed on the north shore of Mono Lake, California, at a spot five miles north of Leevining known as "Black Point Cinders." The Black Point is an old extinct volcano, much older than the famous chain of 21 Mono craters located three miles from the U. S. Highway 395 near Leevining. The claim is made up of small black volcanic cinders. Each cinder is composed of tiny air cells, sealed from each other so no moisture can penetrate them. Their lightness and insulating qualities make these cinders a

superior building material. The owners plan to sell the cinders to the building block trade and for cement construction. Shingle manufacturers now are experimenting with the Black Point cinders and expect to use them in future construction.—*Inyo Register*.

THE *Desert* MAGAZINE CLOSE-UPS

New contributors to *Desert* this month are Joern and Louise Gerdt, who wrote the story and took the pictures for the Indian school feature at Bingham Canyon, Utah.

The Gerdt's are a free lance team—Louise the writer, and Joern the photographer—a team that has many things in common with Josef Muench and Joyce Muench of Santa Barbara.

Joern Gerdt came to the United States from Germany on the last boat before United States became involved in the last war. He began selling photographic covers to German magazines at the age of 16 and was regarded as a genius in the field of photography. Louise had been working as a typist in the publicity office of the Yosemite Park and Curry company.

They met at the ski lodge at Donner Summit, California and were married in 1942. Since Joern, because of his German parentage, was not allowed to possess a camera in 1942, the newlyweds secured work at a remote hotel on the top of the cliff at Glacier point—Joern as chief cook, and Louise as waitress and chambermaid. Later they were transferred to Badger Pass as managers of the ski lodge there.

In 1943 they moved to Salt Lake City, and lacking a studio they earned their way with night club photography. Although it was profitable work, they found it a dull way to make a living and decided to venture into the field of free lance writing and photography.

It is a highly competitive field and the Gerdt's worked long and hard to gain recognition. Louise writes: "We have now reached the miraculous stage when we are able to support ourselves free lancing for magazines. Needless to say, we enjoy our work. There is never a dull moment—our subjects include lions, governors, snakes, sheep, skiers, monks, Indians and uranium mines. Most of our work consists of photographic assignments from magazines for Joern, and I am sort of a glorified secretary, doing the research and writing the captions. Occasionally I sell an article or story."

Hard Rock Shorty of Death Valley



Hanging on the wall in the general store at Inferno was a fishing rod and reel. No one around the store could recall that it had ever been used—but it was there, covered with the dust of ages.

One day a station-wagon load of dudes stopped at the store for cold drinks. One of them happened to glance up at the fishing rod.

"Funny place fer a fishin' rod," he remarked. "I'll bet there isn't a pool of water big enough for a minnow within a hundred miles of here." Some of the others took up the subject and began to wisecrack about the dryness of Death Valley.

Hard Rock Shorty was helping the clerk that day. He didn't care much for dudes anyway, and when they began to make uncomplimentary remarks about Death Valley his blood pressure began to go up. He stood it as long as he could.

"Sure we got fish here," he exclaimed. "All kinds of 'em.

We've got fish you-all never heard tell of. We got fish that hop around like toads. We got flyin' fish and walkin' fish and fish that have skids on their fins an' use their tails fer propellers.

"Yu don't need fishin' poles to ketch the kinda fish we got up here. We got fish that'll come right into the kitchen an' jump into the fryin' pan. The hotter it is the better they like it. You bozos from the city don't know nothing about fish.

"Why Ol' Pisgah Bill once had a tame fish that'd foller him around wherever he went. Bill kept 'im around the house to ketch flies and usually took him along on his prospectin' trips. 'Twas a bad day fer Ol' Bill when that fish met with a accident. Bill usta put him on the dinin' table an' feed 'im crumbs at mealtime. They wuz great pals, till the day Bill left a pail o' water sittin' by the table, and the fish slipped an fell into the bucket. An' before Bill could git him out he wuz dead. Yes, that fish was drowned."

LETTERS...

Case of the Rambling Dam . . .

Victoria, Texas

Desert:

I lived in Arizona for 35 years, but I have been away from the state for a little over six months. What on earth has been happening during my absence? I find in the September *Desert Magazine* that the *Verde Independent* is quoted as saying that Roosevelt Dam is "approximately 140 miles north of Cottonwood." It used to be southeast of Cottonwood. *Life* hasn't been tampering with the state again, has it?

And I resent the statement that Roosevelt Dam "looks like a miniature of Hoover." It doesn't. It has a broad grin from canyon wall to canyon wall just like the smile of Roosevelt I.

And I was doing fine on the Desert Quiz until I came to question No. 12 indicating that Ramon Hubbel (it should be Roman Hubbel) is dead. That was quite a shock to me, because he seemed very much alive when I had dinner with him just the evening before tackling the quiz.

REV. VICTOR R. STONER

Recalls Stage Coach Days . . .

Pasadena, California

Desert:

In his article, "Agate Trail in Nevada," Harold Weight mentions the old Pony Express station which he calls "Fort Finley." I have talked to one of the oldtime stage drivers, and he tells me the name of that particular depot is "Nevada Station," as referred to in Mark Twain's *Roughing It*.

My brother and I own the land upon which this station rests. Standing inside the ruins now, tumble-down as they are, we get a distinct feeling of identification with the pioneers who came across the desert and here made history. We have hopes of restoring the building as it was in days long past, to preserve it as a landmark which others also may visit and enjoy.

GEORGE P. BOSSERMAN

Sandspikes a Mystery . . .

Fullerton, California

Desert:

Among my special interests in mineral collecting are odd sand formations. I have a number of sand spikes from near Signal Mountain, several from east of the Salton Sea and some from Arizona. The oddest of my specimens I gathered in Palm Wash, near Truckhaven. These are spiral in form, some

right hand twists, some left hand, others just plain rolls and twists. One large multiple piece is comprised of a variety of twists and other strange forms.

Like others who find fascination in these strange sand structures, I cannot but wonder how they were formed. I never have heard any plausible explanation nor can I provide one myself.

It is quite easy to imagine how those that come from the Kane Springs area were fashioned. They undoubtedly were shaped by caprices of water and wind. But the sand spikes and "twisties" do not follow this theory.

I would be pleased if you or one of your readers could supply an answer to the sand spike puzzle.

CHAS. S. KNOWLTON

Nor have I ever heard a satisfactory explanation of these corkscrew concretions. Several years ago John Hilton wrote a story for Desert Magazine explaining the other concretion forms—but he admitted he was stumped when it came to the spiral type. This also is true of sandspikes.—R.H.

Patients Need Cutting Material . . .

Casa Grande, Arizona

Desert:

I recently visited the Veteran's Hospital at Tucson, Arizona, and was delighted to find a lapidary outfit installed since my last visit and a new class begun in gem cutting and polishing. Mr. Wilson, volunteer worker in occupational therapy, directs the very fine work being done.

However, since this is a tuberculosis hospital, the patients cannot go rock and gem hunting. If any collectors among your readers would be kind enough to share their rocks with these boys, I am sure they would be many times repaid in gratitude.

RUTH DYER HURD

"Four Corners" Draws Blank . . .

Chicago, Illinois

Desert:

I have listened to many vacationists who have toured Utah, Colorado, New Mexico and Arizona; yet when I ask if any have seen the Four Corners, I draw a blank. There seems to be very little said about the only point in the United States where four states meet. Surely there is someone who has been there. Is it possibly material for pictures or a story?

HARRIET NARISS

The Four Corners region has many things of interest, and we have printed numerous feature stories taken from the area. But the actual geographical point, reached by a bad road, hasn't much except the monument. —R.H.

Search for Fossils . . .

Whittier, California

Desert:

I heartily approve the method and purpose of your excellent magazine, especially the field trips. But I would like to see more material about fossil areas. My education in that subject was terribly neglected, but I have seen what I believe to be excellent hunting grounds.

If you know of a young student or expert in this field who would haul me along, I will be glad to serve as guide.

PAUL J. LINSLEY

Cowboys First Found Glyphs . . .

Washington, Pennsylvania

Desert:

I was very much interested in the item, "Flagstaff Was Resort in 638 A.D.," which appeared on page 27 of the October issue. It speaks of petroglyphs found on the wall of a small canyon by archeologists from the University of Illinois and the Museum of Northern Arizona.

Many years ago, when I was riding for the COBar, I knew that country well and was greatly interested in the many ruins scattered over the country a little east and north of the San Francisco Mountains. These ruins then were known as the Black Falls group. They were located on what we knew as White Mesa.

I believe that the petroglyphs mentioned in the article are those in a small canyon on White Mesa, about two miles west of the Little Colorado River at the old Tanner Crossing, which is approximately the present location of Cameron Bridge. This small canyon ran to Tappan Spring. On a very smooth section of the canyon a short distance west of the spring were a number of interesting petroglyphs. As they were the only ones I know of in that section, they must be those referred to.

However, they were not discovered by the archeologists mentioned. As early as 1890 they were known to all of the cowboys and sheepmen in that section. Ben Doney, Jr., a cowboy, took me to them in the summer of 1904. His father was an amateur archeologist and had made the first excavations at the Black Falls group. In the summer of 1896 he guided Dr. J. Walter Fewkes to the ruins, and the latter conducted extensive excavation. Undoubtedly Mr. Doney also directed Dr. Fewkes to the petroglyphs.

The canyon, according to my recollection, is 20 or 25 feet deep and not more than 15 feet wide. Just below the smooth rock face on which the petroglyphs were carved was a small shelf on which the prehistoric artist stood. The glyphs were very dim but

were cut deep. I tried to photograph them and was partially successful with an old 4x5 plate camera.

A sheepman named Glore ran a band of sheep near the main Black Falls ruins in the early 1890's. He made a corral by walling up one end of a small canyon at the ruins with a stone fence made of metates. I saw this when at the ruins in 1904.

We found an old five-gallon coal oil can that Glore had used for water, and we filled it with arrowheads, stone axes and other artifacts. We had but a pack outfit and, unable to carry the can with us, we buried it, expecting to reclaim it when the roundup wagon came that way in the fall. But when we returned with the wagon we could not locate the spot. I suppose the can is still there, waiting for someone to discover it and wonder who buried it. There were enough Indian implements to stock a small museum.

I might add that the ruins known as the Black Falls group and those on nearby White Mesa are among the best preserved pueblo remains in northern Arizona.

EARLE R. FORREST

• • •

When a Lion Roars . . .

Grand Canyon, Arizona

Desert:

I have heard from some that the North American mountain lion or cougar has a cry like a woman in distress. Others say it utters no sound. These contradictory claims both were shattered by a mountain lion I met this fall on a camping trip in the region between Grand Canyon and Dripping Springs Trail.

I had returned to camp late one evening after an all-day hike. I fixed a bite of supper and, being tired and a little chilled, crawled into my sleeping bag. A full moon made the night seem like day. Everything was still, and I was becoming drowsy.

All of a sudden, from directly behind my head, came the most frightening roar I have ever heard! Unconsciously I twisted in my bag and was on my knees facing the sound. I saw a large animal behind a thin bush not more than 50 feet away.

My thoughts raced! "What is it?" Its roar was similar to those of African lions I'd heard in zoos — certainly nothing like what I'd expect from a mountain lion!

Stunned for a moment, I soon regained my senses and began to shout and wave my arms. Instead of leaping away, the animal came into the open, emitting low growls. I thought of the trench shovel against the tree, grabbed it and faced about.

The animal had moved out into full

moonlight and seemed much closer. It slowly circled to the left. Then I noticed a second lion, considerably smaller than the first. They came together and, finally, moved off through the pines.

I grabbed a bucket. Striking it loudly with the shovel, I banged my two uninvited guests a good sendoff. I slept very little that night!

When friends joined me several days later, they laughed at the empty cans I had suspended from tree limbs in scarecrow fashion. But they changed their tune when it came time to turn in. We measured the lion's tracks and estimated his stride was at least two feet long. He had come within 15 feet of my sleeping bag.

BILLY LAUGHERY

Firing Squad for Vandals . . .

Klamath Falls, Oregon

Desert:

Your answer in the August issue of *Desert* to that fellow who wanted to get a piece of the petrified tree trunk on the Nevada desert, described by Nell Murbarger in the July issue, was not strong enough. People who have no more appreciation of Nature's landmarks than that ought to be court-martialed and shot on the spot.

J. D. HOWARD

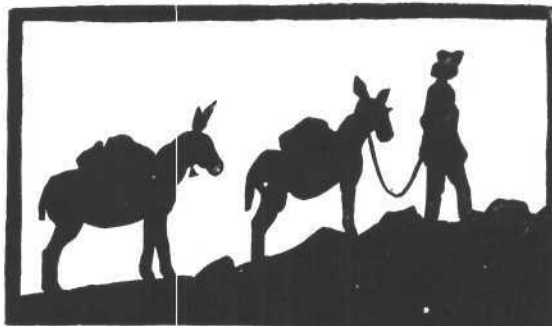
• • •

Arizona's giant cactus, the saguaro, is the subject of a colorful 27-page handbook titled *Meet the Giant Cactus*, written and published by Elsie Haynes of Denver, Colorado. The booklet is illustrated with both half-tone and line drawings. 50 cents.

On Desert Trails With Everett Ruess

Everett Ruess dreamed of a wild carefree life in the far places of the earth where, unfettered by the petty restrictions of civilization, he could explore the unknown wilderness and paint and write as he roamed.

He lived with the Indians, he explored ancient cliff dwellings, disappeared in the desert wilderness for weeks at a time, and each time he returned to the haunts of men he wrote of his experiences.



IN 1934 HE DISAPPEARED

In November, 1934, he and his burros headed off into the red sandstone country of Southern Utah—and he has never been seen since then, and although there has been a widespread search for him, no clue has ever been unearthed to reveal his fate.

But in his diary, and the letters he wrote, he left a rich legacy for those who would find the peace and beauty in life.

All this material together with many of his block prints and sketches are included in **ON DESERT TRAILS WITH EVERETT RUESS.**

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THE *Desert* MAGAZINE

Palm Desert, California

Turtles for Tewaquaptewa

Turtle shells, symbolic of water, are used as rattles in Hopi ceremonial dances. During a visit to Southern California, Chief Tewaquaptewa of Oraibi mentioned to a boys' organization that his village's supply of shells was dangerously low. The youthful members immediately launched upon a campaign to solve the Indians' dilemma . . .

By HARRY JAMES

Photographs by the author

EARLY ONE late spring morning a fisherman with empty creel muttered fisherman's oaths as he watched a group of small boys advance

cautiously among the gigantic boulders of California's Sespe Creek toward his favorite pool. He saw them sneak up to a shallow place, plunge

Chief Tewaquaptewa of Oraibi holds two live turtles whose shells will provide rattles for ceremonial dances of his village.



their hands into the water, and feel around in the thick mats of water weeds. Suddenly from a boy at the head of the group he heard a yell of delight, "I've got one! I've got one!"

The object of the exclamation proved to be a struggling California mud turtle. The man wondered why the capture of such a common animal should evoke such shouts of triumph. He continued to wonder as the turtle was dropped into a gunny sack carried by one of the older boys.

"How many have we now?"

"That's the fourth one. Good hunting today."

"What are you going to do with them?" queried the curious fisherman.

"We're gonna send them to the Hopi Indians over in Arizona," volunteered one of the youngsters.

Back of his casual statement lay a rather interesting story.

Tewaquaptewa, the village chief of Oraibi, the oldest of all the ancient villages of the Hopi, had visited for several days during the previous winter at the headquarters of The Trailfinders, a boys' organization in Southern California. Many times during his stay he had told the boys of his desire to secure a number of mud turtle shells to make into dance rattles.

He explained to them that the Hopi ceremonial dances are nearly all prayers for rain and for bountiful crops, so in these ceremonies they use costumes and accouterment suggestive of anything pertaining to water; hence, the choice of turtle shells as the material for dance rattles. In the arid Painted Desert these turtle shells are hard to find. They are precious things to be treasured through the years.

Chief Tewaquaptewa had hoped that he could replenish the supply of shells on this visit, for there was a serious shortage of them at Oraibi, despite the care given to their preservation. Unfortunately, California mud turtles were hibernating during the winter, and the Chief could not remain until spring when they could again be found. He had to plant corn and care for his sheep and conduct the ceremonies for his village.

His disappointment spurred the boys to plan a turtle hunt in May and ship the whole catch to Oraibi as a surprise for the old Chief. Now it was May and the turtle hunt was on.

The search for the turtles was made

with due care that the supply should not be fished out entirely. Only good old specimens at least five inches long were taken, and only a few of these, from each of several different streams. During three or four week-end trips through the Sespe, the Piru, and the canyons of the Santa Monica Mountains a dozen husky specimens were assembled.

A special box was constructed to hold a quantity of wet moss and to provide plenty of fresh air. The turtles were packed and expressed to Winslow, Arizona. A letter to the Chief preceded the shipment, and a Hopi boy was on hand to get the box as soon as it arrived.

As the express agent handed him the package, the young Hopi heard the turtles scratching inside. He knew what the box contained, but he had not dreamed that the turtles would be sent alive! He was thrilled. He drove the 70-odd miles back to Oraibi and when his truck refused to climb the steep road up to the mesa, he seized the box and scrambled up the trail. As he neared the top he began singing out to the Chief and to everyone within hearing distance that the turtles had come and that they were alive.

The word was carried quickly from house to house. By the time he reached Tewaquaptewa's home nearly half of the village was there. The important chiefs and the ceremonial leaders were allowed to examine the box with Tewaquaptewa. One of the chiefs started to pry off a board on top. Tewaquaptewa stopped him. "First we must make prayers for these rain-bringers," he said.

While a tom-tom was dragged out on the flat roof of his house, Tewaquaptewa disappeared inside the dwelling and emerged a few seconds later with a tiny bag of sacred corn meal. A song of thanksgiving was sung, welcoming the water creatures to Oraibi. As more or less sacred animals, they were asked to bring rain to all the Hopi villages, so that the corn might flourish and that the sheep might have plenty of food. Then Tewaquaptewa sang a special song to them, praising the boys in California for catching them.

While he sang he pried open the cover of the box and scattered sacred corn meal out in a trail from the box. Slowly the turtles tumbled out and crawled across the meal, dampening it with their wet legs and bodies.

Never before had any of these Hopis of Oraibi seen a live turtle. All day



Don Talayesva, another chief of the Pueblo of Oraibi, shared the delight of the other Hopi tribesmen at the arrival of the California turtles.

long the people kept returning to the Chief's home to see the strange creatures. Among the visitors were the inhabitants of other Hopi villages—Hotavilla, Bacavi, and even Mishongnovi and Shipolovi.

That night there were further song-prayers in their honor, and a ceremonial smoke by the leader of the Corn Clan. Then the turtles were ceremonially killed in the chief's kiva. Later the shells were cleaned with the dew claws of sheep or deer and then dried. Then the dance rattles were in readiness for use in the great Niman Kat-china dance of early summer.

JUDGES NOW SELECTING WINNERS IN STORY CONTEST

Desert Magazine's "Life on the Desert" story contest which closed November 1 brought literally scores of manuscripts from writers all over the Southwest, most of them folks who make no claim to professional journalism.

Members of the magazine's staff who are serving as judges are putting in extra hours reading and re-reading the stories for the selection of winners. Results will be announced in the January issue of *Desert*. Non-winning manuscripts will be returned to the authors if postage was enclosed.

MINES AND MINING . . .

San Francisco, California . . .

Pala district of San Diego County, California, which has produced nearly a million dollars worth of minerals, is the subject of a report issued by the California State Division of Mines. *Gem- and Lithium-bearing Pegmatites of the Pala District, San Diego County, California* is the scientific study of a famous gem-producing district that has been providing semi-precious stones, crystallized mineral specimens and important minerals since the 19th century. The two authors, Richard H. Jahns of the California Institute of Technology, and Lauren A. Wright of the California State Division of Mines, spent nearly two years in field and laboratory study of the area. Their report is illustrated by numerous photographs and maps of the district. Color plates of crystals and gems also are included.—*Division of Mines Bulletin*.

. . .

Washington, D. C. . . .

Thomas H. Miller of Laramie, Wyoming, has been appointed acting director of the Bureau of Mines, to succeed Dr. James Boyd. Miller, former assistant director of the bureau, virtually has been running the department for the past several months, while Dr. Boyd has concentrated on direction of the Defense Minerals Administration. Miller's appointment is on a temporary basis. Another chief of the division may be named at a later date.—*Salt Lake Tribune*.

. . .

Humboldt, Nevada . . .

Successful production of electrolytic manganese from the Three Kids Mine in Las Vegas Wash, Clark County, is described in a progress report released by the Bureau of Mines. The manganese is obtained with purity of 99 percent from low-grade ore by use of a chloride electrolyte. The report includes details of the crushing, grinding, roasting processes, the solution purification and data pertaining to the electrolysis. While no economic comparison between the sulfate and chloride processes is offered, it was indicated that the latter would be more difficult and expensive to operate. A free copy of Report of Investigation on Electro-winning Manganese from Chloride Electrolytes may be obtained from the Bureau of Mines, Publications Distribution Section, 4800 Forbes Street, Pittsburgh 13, Pennsylvania.—*Humboldt Star*.

Elko, Nevada . . .

A new enterprise has been developed near here which will mine iron ore and ship it unrefined to Japan. The project, announces J. R. Simplot, president of Simplot Iron Mines, Inc., will be located on property 26 miles from Palisade, which is 29 miles west of Elko by rail. From 20 to 30 carloads of ore leave Palisade daily for Oakland, where the ore is loaded on ships. Each carload contains 55 tons. Simplot said the cargo now enroute to Japan is a trial shipment. He plans to leave for Tokyo within two weeks to carry on further negotiations with the Japanese company contracting for the ore.—*Pioche Record*.

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Vernal, Utah . . .

Discovery of a great buried basin north of the Uintah Mountains has resulted from work of the University of Utah geology department. Economic value of the work being done by the students almost overshadows its academic value for it is believed the area may be another Uintah Basin as far as oil production is concerned. The recent developments have stemmed from four years' work at the geology field camp some six miles east of Oakley, Utah, on the Upper Weber River. The camp, established each summer for senior and graduate students, is in the center of several thousand square miles of all types of geologic and structure features. Sediments of all the geologic eras are present in the area. Detailed stratigraphic mapping got underway during the 1948 field season under the direction of Prof. Norman C. Williams and his staff. Prof. Williams likened the basin to a huge bowl covered with a thick blanket of sediments. "Every once in a while we find a canyon cutting through the blanket which lets us take a look at the edges of the bowl so that we can get some pretty good ideas on what lies underneath," he explained. Prof. Williams says the study eventually will be published, both for its economic and academic interests.—*Vernal Express*.

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Humboldt, Nevada . . .

Making an airplane survey with a powerful scintillometer, Miles Andrews, consulting geophysicist, located an important atomic ore producing area near Meeker. Some of the ore carried one percent uranium. Andrews has sold the property to the Uranium corporation of California for \$50,000.—*Humboldt Star*.

Tombstone, Arizona . . .

Old Emerald Mine near Tombstone is producing again, after lying idle for more than half a century. The mine, opened in the early 1880's, is yielding lead, copper, silver and zinc recoveries, announced Freeman Lomelino, head of the Lomelino ore milling interests. Attention at present is directed to the 500 level drift of the mine, which is in reality 570 feet below the top of the shaft and not more than 100 feet above the top of the water level. All the local mines were flooded in the 80's and resulting mining inactivity all but made a ghost town of Tombstone. The Lomelinos found the shaft and workings of the mine property in fair and workable condition.—*Tombstone Epitaph*.

. . .

Tucson, Arizona . . .

Arizona's total mineral production in 1950 was higher than any year since World War I, the Arizona Statistical Review reports in its 1951 edition. Mineral production last year totaled \$201,034,000 over \$79,000,000 above the peak production of World War II. The 1950 total, however, was short of the \$203,572,000 record set in 1918.—*Tucson Daily Citizen*.

. . .

Pioche, Nevada . . .

A \$600,000 tungsten concentrating plant with 250-ton daily capacity will be built near the Lincoln mine at Hiko, according to an announcement by officials of Lincoln Mines division of Black Rock Mining corporation. At present, about 60 tons of ore are being trucked daily from Hiko to Bishop, California, for treatment.—*Pioche Record*.

. . .

Los Angeles, California . . .

Fumbling governmental controls and general confusion in Washington are to blame for shortages of strategic metals currently crippling the defense program, according to mining men attending the 1951 Metal and Non-metallic Mineral Mining convention of the American Mining Congress. To clear up the confusion in which the industry finds itself, the group recommended that the government adopt a four-point program. It calls for a realistic uniform price structure to increase incentives; assurance of stable metal prices to permit additional production; constructive administration of the recent tax law to maintain and extend ore reserves needed for national security; and consideration of domestic mines to assure their enjoyment of advantages at least equal to those offered foreign properties.—*United Press*.

HERE AND THERE ... on the Desert

ARIZONA

Painting Locates Old Wall . . .

TUCSON—There are many disputes concerning the old Tucson city wall, almost all of which was destroyed long ago. Mrs. Mary Navarette Cordova lives today in a house built 101 years ago by her ancestors within the ancient wall. A painter and historian, she has just completed a canvas depicting her conception of the walled Tucson of 1850, basing its location and structure on personal observations and on data given her by relatives now dead. She pictures a morning raid by a band of Apaches and a Spanish father raising a crucifix in the hope that the Indians would respect the Christian symbol.—*Tucson Daily Citizen*.

Elk Killer Runs Wild . . .

FLAGSTAFF—A killer, who shoots game for the malicious fun of destroying it, has left numerous carcasses of elk, turkey and deer to rot in Coconino National Forest. Apparently the big game animals were wantonly killed, as only one had been butchered out.—*Tucson Daily Citizen*.

Won't Breed Scorpions in Lab . . .

TUCSON — It takes the deadly sculpturatus scorpion five years to reach maturity, thus becoming useful for laboratory experimentation. This is one reason why Dr. Herbert L. Stahnke, director of poisonous animals research lab at Arizona State College, Tempe, will not breed his own scorpions for preparation of anti-scorpion serum. Dr. Stahnke still is short several thousand of his goal of 10,000 scorpions. As soon as all hospitals are supplied with the serum, he will be able to build up a reserve supply which would obviate any future full-scale scorpion "hunts."—*Tucson Daily Citizen*.

Sees End of "Wetback" Era . . .

TUCSON — "This year marks the end of the wetback era. The American farmer might just as well face up to it," said Michael J. Galvin, under-secretary of labor, stopping in Tucson on his inspection tour of immigration labor border stations. The under-secretary said contract workers, Mexican nationals, were being supplied growers efficiently and promptly through a new agreement. "Hiring illegal entrants from Mexico no longer is economical nor advisable from any point of view," he observed.—*Tucson Daily Citizen*.

Meat Shortage Met . . .

BENSON — Southern Arizona is short on the traditional meat fare of the Navajo. When 70 Navajos arrived in the San Pedro Valley to pick cotton, they brought along an unexpected problem in dietetics. Mutton isn't sold in San Pedro market places, so several animals had to be purchased and imported to the area. The Navajo women butchered the sheep and mutton stew soon again was bubbling over evening campfires.—*San Pedro Valley News*.

Canyon Travel Sets Record . . .

GRAND CANYON — A record number of persons visited Grand Canyon National Park this year, according to Superintendent H. C. Bryant. Total for the year, which ended in October, was 688,673, compared with 654,348 last year. This reveals an increase of 34,325. The record travel month was July, when 130,719 persons visited the natural spectacle. This is an average of more than 4300 per day.—*Coconino Sun*.

Navajos May Move Stock . . .

WINDOW ROCK—Since rains during the past months have been adequate on only a small fraction of the Navajo Indian reservation, most areas are without enough forage or stock water for the coming winter. Solving a similar situation last year, the tribal council assisted stockowners by buying supplemental feed and establishing

a loan fund. This is inadvisable this winter, because of economic factors involved. An alternate solution is the winter movement of livestock to mid-western areas where feed is available.—*Coconino Sun*.

Woman Leaps from Canyon . . .

GRAND CANYON — A woman identified as Mildred Violet Allen of Pasadena was killed in a suicide plunge from Maricopa Point 400 feet into the Grand Canyon. Her body hurled down the almost sheer bluff, striking the edge twice and then rolling to a halt a few hundred feet short of the next cliff. Park Rangers and park service employees made their way down to the ledge and recovered the body. The death was the second from a fall into the canyon this year.—*Tucson Daily Citizen*.

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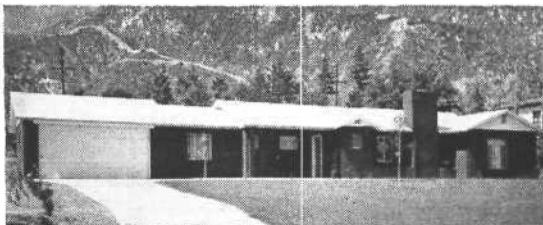
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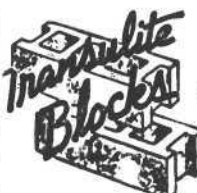


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OCOTILLO: Scenic desert Sweeney Pass road from Highway 80 at Ocotillo to Agua Caliente hot springs, is nearing completion. Over 10,000 campers visited the hot springs the past year many of them benefitting greatly from the treatment. Residential lots with mutual rights to soft water are still on sale at \$250.00. Opportunity to get on ground floor of business in a development with highway and railroad. Send for circular. John C. Chalupnik, P.O. Box 792, Alpine, California.

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DESERT TEA. One pound one dollar postpaid. Greasewood Greenhouses, Lenwood, Barstow, California.

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PROSPECTORS AND ROCKHOUNDS WANTED. To join the newly incorporated United Prospectors Organization. If you are experienced or beginners the articles in our magazine are bound to help you enjoy your hobby and the outdoors. Send your name for our new brochure and literature. United Prospectors, Box 729, Lodi, California.

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WANTED TO BUY: Curled date palm, thistles, seed pods, Manzanita, Oxytheca Ferfoliata, all interesting desert growths. I will buy in quantity. Please send description and price wanted. Hilo Steiner Studio, 500 Harding Rd. Fair Haven, New Jersey.

CALIFORNIA

Chukar Study Planned . . .

SAN FRANCISCO—One of the least known of California's game birds, the Chukar Partridge, will be subjected to a year's field study by the California Department of Fish and Game. The state-wide study, headed by Donald D. McLean, game biologist, will look into the Chukar's range, food, life cycle, enemies and competition with other game birds. As well, it will investigate the possibilities of stocking new areas. The Chukar was introduced here in 1928 from the orient, where it has been hunted for centuries.

Ramona's Son Dies . . .

BANNING—Condino Hopkins, last surviving son of Ramona, heroine of Helen Jackson's novel, died in Banning at the age of 65. Services were conducted at the Torres Indian Reservation, where Hopkins had resided for 40 years.—*Banning Record*.

Miner Escapes Blast . . .

BISHOP—If prizes were handed out for the luckiest man of the year, Harry Willis, employee of the hanging Valley tungsten mine, would win hands down. Willis was trapped in the mine west of Bishop when 50 rounds started exploding. He ducked behind timbers and his two partners later rescued him. He suffered only minor bruises.—*Inyo Register*.

Valley Growers Wait . . .

EL CENTRO—Untouched by harvester are 20,000 acres of castor beans in the Imperial Valley. Yet while the plants are full green and capsules still putting out on stems, the government is calling for double the acreage for next year. Growers can be guided only by guesswork as to yield and profits. Some 1951 growers have not decided whether they will plant any at all next year, although the government has set a guarantee of \$200 a ton for this year's crop.—*Imperial Valley Weekly*.

Fiesta for River Indians . . .

BLYTHE—A thousand pounds of barbecued beef were served to several hundred Indians on the Colorado River Indian Reservation by the citizens of Blythe on October 27. In addition to the Mojave and Chemehuevi tribes who have lived in this Colorado River valley for countless generations, the guests also included over 200 Hopis and Navajos who within recent years have been transplanted from northern Arizona to the rich bottom lands along the Colorado and have established permanent homes here for farming and stock raising. The tribesmen entertained their hosts with their own band and ceremonial dances.—*Palo Verde Times*.

EL CENTRO—All phases of the new program of employing Mexican nationals as United States farm laborers are covered in an agreement published recently. There are 40 articles in the pact, which details obligations of worker, employer and agencies of the two governments responsible for administering the program. Some of the articles have as many as ten subdivisions, telling how to proceed at every step beginning with the signing of the recruits and ending with rules for return of the workers to their homes.—*Imperial Valley Weekly*.

PALM DESERT—Two new newspapers — the Cathedral Citizen and Palm Desert Progress—made their appearance in the Coachella Valley November 1, with Ernie and Betty Maxwell, formerly of Idyllwild, California, as editors and publishers. The new papers, printed at the plant of the *Desert Magazine* in Palm Desert, are edited "to serve the 2500 permanent residents in the cove communities along the base of Santa Rosa mountains in Coachella Valley." The newspapers in their first issue suggested that Highway 111 between Palm Springs and Indio be known as Date Garden Drive, as several miles of the 24-mile sector are lined with Coachella Valley's scenic date gardens. Settlements and subdivisions where the two papers will circulate include Smoke Tree Ranch, Araby, Tramview, Sunair, Cathedral City, Wonder Palms, Thunderbird Ranch, Rancho Mirage, Palm Desert Air Park, Palm Dell, Palm Village, Palm Desert, Panorama Ranch, Deep Canyon Ranch, Indian Wells and La Quinta.

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higher prices for ore has sparked a revival of the old Bagdad-Chase mill located in West Barstow. The mill, which has been shut down since about 1910 except for a few attempts to rework the tailings, will be put into operation by the Pacific Coast Mining and Milling company. With the installation of modern equipment, a new laboratory and the use of flotation method the company hopes to extract enough gold, copper and silver from the area to help pay for the project which will cost approximately \$50,000. A new road will be built to the location and new buildings erected. — *California Mining Journal*.

RENO—Last of the historic Virginia and Truckee Railroad's locomotives is being scrapped for junk. Locomotive No. 5, pride of the V and T shortline since 1925, is being torn apart by acetylene torches. The locomotive was slated for purchase by Western Pacific Railroad, but officials said it would be worth more as junk than as rolling stock. The railroad, born during the heyday of the Comstock mining boom, was abandoned last year after 81 years of continued service.—*Las Vegas Review-Journal*.

Boulder City—The *Goldfield News* has moved from its old plant in Goldfield and now is operating at 1500 Nevada Highway on the edge of Boulder City.—*Goldfield News*.

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What's In a Name? . . .

GOLDFIELD—Culled from the list of delinquent mining claims are some of the more interesting names—chosen for what reason? Who knows? For instance: Henry Clay, Jefferson, Monroe and Cracker Jack, Sandstorm; Burnt Hill, White Jacket, Red Boy, Magnolia, Carrie Bell, Duckwater Dam, Christmas Gift, Ham Horse,

Partners in Crime, Lost Canteen, Cut Diamond, Neglected, Goldie, Water Fountain, Prospector's Friend, Minnewas, Three Sheds, Big Lize, Gold Locket, Desert Rose, Last Hope, Indian Summer, Good Old Summertime, Starlight, Messina, Robert Emmet, Stromboli, Battle Cruiser, Copper Belle, Snow Storm, Ruby Hill, Black Side, Tarantula, and Centipede. — *Goldfield News*.

BOULDER CITY—Hidden away in a box canyon on the old Mormon trail, between St. George and the old Pierce Ferry crossing of the Colorado, is a tiny replica of Hoover Dam. The little masonry dam, constructed by CCC Boys before World War II, is remarkably like the great finished structure. Cattle ranchers find it useful, in dry weather, as a water supply storage basin. — *Las Vegas Review-Journal*.

New Grazing District Set Up . . .

WINNEMUCCA — An advisory board for the New Nevada grazing district, embracing most of Lander, Eureka and Nye counties, is scheduled, according to the Bureau of Land Management. To be known as the Central Nevada Grazing District No. 6, it embraces approximately 7,500,000 acres and was set up recently by

the Department of the Interior over protests of some of the ranchers in the area. Only persons actively engaged in the livestock business are eligible for membership on the board. — *Humboldt Star*.

Bomb Tests Draw Tourists . . .

LAS VEGAS—Hope of seeing and feeling the effects of a "baby A-bomb" blast has become as great a tourist lure here as the chance of doubling money at the roulette wheels or dice tables. Resort hotels and motels reported an unusual influx of visitors who admitted they came to watch the spectacular atomic fireworks display as much as they did to gamble. Atomic Energy commission officials, visiting newspapermen and the local press have organized the Ancient and Honorable Society of Atom Bomb Watchers, which held its first meeting at the Flamingo Hotel in Las Vegas. — *Las Vegas Review-Journal*.

Pine Nuts Tell Weather? . . .

FALLON — According to an old Indian belief, this winter will be mild in western Nevada and severe in the eastern sections. Indians believed the abundance of pine nuts indicated an especially cold winter ahead. There is a scarcity of the nuts in Western Nevada, while areas to the east enjoy an unusual abundance. — *Fallon Standard*.

Old Church Faces Repairs . . .

AUSTIN—St. Augustine's Catholic Church, very likely the oldest church in Nevada, will get a new roof to replace the original one, now patched and worn, which dates back to the edifice's erection in 1866. Necessary lesser repairs in replacing broken window panes and fixing the picket fence also will be made. For a number of years, the historic church has had no resident pastor, but has been conducted as a mission. — *Reese River Reveille*.

WANTED . . .

Desert Magazine Staff is seeking exceptionally colorful desert Kodachrome films for future use as cover pictures.

Only transparencies can be used and they **must be 4x5** or larger—none smaller can be considered.

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Ceremonial Receipts Higher . . .

GALLUP—Aided by a state appropriation of \$19,000 this year as against \$10,000 in 1950, operating receipts of the Inter-tribal Indian Ceremonial association showed a gain of \$6087 over the previous year, while operating expense was but slightly higher. The result was an operating deficit of \$6517 compared with a deficit of \$12,091 for 1950.

School Merger Planned . . .

ALBUQUERQUE — A plan to merge the Albuquerque Indian school with the city-county school system is under consideration. Indian service officials were authorized last January to look into the possibility of a merger, Eric T. Hagberg, local director of the Indian bureau, said. The Albuquerque board of education has authorized Supt. John Milne to investigate the matter further.—*Gallup Independent*.

Indian Wars Veteran Dies . . .

GALLUP — Richard M. (Dick) Mattox, veteran civilian scout of the Indian wars and for many years a colorful character in Gallup, died two days after reaching his 79th birthday. One of the last links with the frontier life of the Old West, he had served in the 1889 campaigns against Sitting Bull and the Cheyenne River Sioux and had ridden with the 7th Cavalry at the Battle of Wounded Knee in 1891.—*Gallup Independent*.

Will Taos Indians Vote? . . .

TAOS — "New Mexico's constitutional provision barring Indians not taxed from voting is discrimination on grounds of race and violates the U. S. Constitution." So ruled a 3-judge federal court recently. The state attorney general's office says an appeal to the U. S. Supreme Court is "probable."—*El Crepusculo*.

Funds Voted for Wells . . .

GALLUP — Congress has voted \$250,000 to drill new wells and develop other water sources on the Navajo-Hopi Indian reservation. The measure was passed in the closing hours of the 82nd Congress's first session.—*Gallup Independent*.

Highway Given Nickname . . .

LAS CRUCES — "Treasure Trail" now is the official nickname for Highway 70. The slogan was adopted at a meeting of the Arizona and New Mexico divisions of the Highway 70 association, organized to sell Highway 70 as "the best transcontinental route for tourists to take."—*Las Cruces Citizen*.

Bat Flights Discontinue . . .

ALBUQUERQUE—Cool temperatures have caused a southward migration of the bats that roost within Carlsbad Caverns. R. Taylor Hoskins, Carlsbad Caverns National Park superintendent, states that a few bats will, undoubtedly, continue to fly each evening until frosts drive them further south or force them into hibernation. However, flights are insufficient for the evening bat-flight programs, and they have been discontinued until spring.—*Penasco Valley News*.

Industry Grows for Navajos . . .

GALLUP—Will Singleton, a wool plant expert from Tennessee, has been employed by the Navajo tribe to set up a carding and scouring plant in the old school buildings at Leupp, Arizona, for the purpose of establishing a small industries program for the Navajos. Joe Janeway, service engineer, has made a recent survey and declares that the water supply is ample. The cards will handle 300 pounds of wool daily. First production has been contracted by Indian traders for distribution among their weavers.—*Gallup Independent*.

Navajos Make Fund Appeal . . .

GALLUP — Pushed back against the wall by the effects of a two-year drouth, the Navajo tribe has appealed to Congress for an emergency drouth relief appropriation of \$2,000,000. The plea was voiced in a resolution unanimously approved by the tribal council after members had voted another \$250,000 of dwindling tribal funds for drouth relief. The resolution declared that such self-help efforts probably will be insufficient to carry the tribe through the winter, although the length and severity of the season will have a direct bearing on the status of the emergency. There is desperate need for additional financial assistance over and above that derived from tribal funds and the personal efforts of the tribesmen.—*Gallup Independent*.


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UTAH

"Porkies" Are Unpopular . . .

VERNAL—Deer hunters in areas where porcupine damage to trees is severe are being asked by the U. S. Forest Service to shoot the quilled rodents on sight. The Forest Service recognizes the porcupine is a natural part of the forest habitat; however, an overpopulation results in excessive destruction of the bark of young trees.—*Vernal Express*.

Let Uncle Sam do Your Xmas Shopping

There's a way to do your Christmas Shopping—or some of it at least—without being caught in the traffic jams and the throngs of buyers who flock to the stores at Christmas time.

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PALM DESERT, CALIFORNIA

Access Road Begun . . .

MOAB—Work has begun on a million-dollar access road construction program aimed to facilitate hauling of uranium ore out of southeastern Utah. Financed largely by the federal government, the project will open for tourist travel some of the state's wildest and most scenic areas. One of the three access roads will extend from Green River south along state road 24 to Hanksville, then on to the eastern base of the Henry Mountains. Another project calls for improvement of 80 miles of road from Blancing to Hite on the Colorado River. The third, and largest, project will improve state road 47 beginning 14 miles south of Blanding and running west to Mexican Hat at the Goosenecks of the San Juan River. Nine miles will be new construction and 34 miles improvement of the present road.—*Times-Independent*.

Utes Paid Half Million . . .

VERNAL—Payday came for the Ute Indians when 1692 collected checks amounting to \$500,000 as reimbursement for lands taken from their tribes in Western Colorado. Each of the adult members of the Uintah, White River and Uncompahgre tribes, whose annual incomes have averaged \$800, drew up to \$1000 each. The

average withdrawal was \$300. The Indians are planning their actions carefully. "Most of them are leaving part of their money, including virtually all due the children, in a reserve fund," said Forest Stone, superintendent of the reservation.—*Vernal Express*.

Tunnel Nears Completion . . .

SALT LAKE CITY—Shaft for the \$1,000,000-per-mile Duchesne tunnel, east of Kamas in the Uintah Range, has been driven more than five miles. Completion of the six-mile bore is scheduled sometime before Christmas. The tunnel will carry water from the north fork of the Duchesne River six miles to the east side of the Uintahs, where it will run down to Deer Creek reservoir.—*Salt Lake Tribune*.

Utah Pioneer is 103 . . .

SALT LAKE—It had been 91 years since Mrs. Anne Catherine Jarvis Milne first entered Salt Lake Valley through Emigration Canyon. But the trail was still familiar to her on a pleasure trip this autumn. Mrs. Milne, Utah's oldest resident, is now 103 years old. She is a native of London, England, embarking with her parents for Boston at the age of eight.—*Salt Lake Tribune*.

Picture-of-the-Month Announcement

Winter has come to the desert. Clear blue skies offer sharp contrast for cloud formations. As it grows colder, snow will creep down the higher elevations of desert ranges.

Winter offers unlimited opportunity for photographers of the desert. *Desert Magazine* is anxious to present its readers the best of their efforts, and is offering cash prizes for prints submitted in its January photo contest. The subject range, though confined to desert areas, is wide—landscapes, plant life, mineralogy, Indians, desert characters, animals, strange rock formations, clouds and sunsets.

Entries for the January contest must be in the *Desert Magazine* office, Palm Desert, California, by January 20, and the winning prints will appear in the March issue. Pictures which arrive too late for one month's contest are held over for the next month. First prize is \$10; second prize \$5.00. For non-winning pictures accepted for publication \$3.00 each will be paid.

HERE ARE THE RULES

- 1—Prints for monthly contests must be black and white, 5x7 or larger, printed on glossy paper.
- 2—Each photograph submitted should be fully labeled as to subject, time and place. Also technical data: camera, shutter speed, hour of day, etc.
- 3—PRINTS WILL BE RETURNED WHEN RETURN POSTAGE IS ENCLOSED.
- 4—All entries must be in the *Desert Magazine* office by the 20th of the contest month.
- 5—Contests are open to both amateur and professional photographers. *Desert Magazine* requires first publication rights only of prize winning pictures.
- 6—Time and place of photograph are immaterial, except that it must be from the desert Southwest.
- 7—Judges will be selected from *Desert's* editorial staff, and awards will be made immediately after the close of the contest each month.

Address All Entries to Photo Editor

The Desert Magazine

PALM DESERT, CALIFORNIA

Record Season Completed . . .

VERNAL — A record number of persons visited Dinosaur National Monument during the 1951 tourist season, according to official count. A total of 12,424 persons viewed the area, 132 of them by air and boat, the remainder in passenger cars. August was the peak month, with 2829 visitors registered. One of the spots most visited was the Pat's Hole country. Artifacts are found in the caves of this region, including some of Pat Lynch, the Civil War Navy veteran for whom the hole was named. Lynch even left his own petroglyphs, one of them a drawing of his battleship.—*Vernal Express*.

. . .

Weed War Planned . . .

MOAB—Anticipating congressional approval of more than \$2,225,000 to combat halogeton, bureau of land management and Indian bureau officials already have mapped their attack against the livestock-killing weed. Utah, Idaho and Nevada contain the largest area of approximately 700,000 acres of public land where the poisonous growth has taken hold. Infestations also have been reported in Wyoming, Montana and California, but the situation as yet is not serious in those states. Reseeding of buffer strips is planned to halt the plant's spread. Spraying, a less effective weapon since

it also kills other broad leaf plants, will be carried out along highways and railroads.—*Times-Independent*.

. . .

FUTURE SOURDOUGHS MAY PROSPECT BY SPACE SHIP

Future space cadets may take off to hunt for gold in the upper air.

They may, that is, if cosmic ray explorers continue discovering metals 20 miles above the earth.

At that altitude these cosmic explorers are finding single atoms of heavier metals and chemical elements. Two years ago they discovered iron. Today discoveries are reported of tin, copper and zirconium and also of the gases of bromine and krypton. But all the other chemical elements are expected, and gold and silver should be early discoveries.

The new heavy elements are found by sending photographic plates up in large balloons. The plates contain

emulsion an eighth of an inch thick. The atoms hit the emulsion and leave electrified trails, densities of which identify the atoms.

Where these space atoms come from is not certain. Evidence that many come from the sun is advanced by scientists from the University of Chicago. Supporting their findings, R. L. Chasson of the University of California reported a decrease in the cosmic atoms during the appearances of a giant sunspot in May and June this year.

The energy of these cosmic atoms is tremendous. They hit molecules of upper air and the impacts set off rays which drive all the way down to earth.—*United Press*.

. . .

Arizona Gain Highest . . .

PHOENIX — Arizona led the nation last year with a 419 per cent gain in farm income.—*Yuma Daily Sun*.

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THE *Desert* MAGAZINE
PALM DESERT, CALIFORNIA

TRUE OR FALSE

Next best thing to a trip out on the desert is an hour with *Desert Magazine's True or False*.

False. It will take you to many interesting places in the Southwest, introduce you to the history, geography, mineralogy, botany and other interesting phases of desert life and lore. Of course few persons know the answers to all these questions. A score of 12 to 14 is fair, 15 to 17 is good, 18 or over is excellent. The answers are on page 41.

- 1—A rattlesnake will not crawl over a horsehair riata. True . . . False . . .
- 2—The Gila River is a tributary of the Colorado River. True . . . False . . .
- 3—Date palm trees were growing on the Great American Desert when the white men first came to this region. True . . . False . . .
- 4—Kachina dolls are made by the Navajo Indians. True . . . False . . .
- 5—The Santa Fe Trail was in use before the Butterfield stage line was established. True . . . False . . .
- 6—Desert mistletoe often grows on Joshua trees. True . . . False . . .
- 7—Sunset Crater National Monument is located near the base of San Francisco peaks in Arizona. True . . . False . . .
- 8—The famous Bird Cage Theater of boom mining camp days was located at Virginia City, Nevada. True . . . False . . .
- 9—Hanksville is the name of a town in Utah. True . . . False . . .
- 10—*Camino* is a Spanish word meaning mountain. True . . . False . . .
- 11—Chief mineral product of the open pit mines at Ruth, Nevada, is iron. True . . . False . . .
- 12—Cochiti is the name of an Indian Pueblo in New Mexico. True . . . False . . .
- 13—A Navajo woman always weaves her rug from the bottom up, never from the top down. True . . . False . . .
- 14—Adolph Bandelier was a famous Mountain Man. True . . . False . . .
- 15—Nearest town to the Petrified Forest National Monument is Flagstaff. True . . . False . . .
- 16—The historic Palace of the Governors may still be seen in Santa Fe, New Mexico. True . . . False . . .
- 17—The Salt River valley of Arizona gets its irrigation water from the Lake Mead storage reservoir at Hoover dam. True . . . False . . .
- 18—Pyramid Lake in Nevada is on the reservation of the Paiute Indians. True . . . False . . .
- 19—The shores of Salton Sea in California are lined with willow trees. True . . . False . . .
- 20—Encelia, also known as Brittle bush or Incense bush, is a desert perennial. True . . . False . . .



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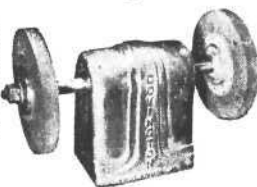


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AMATEUR GEM CUTTER

By LELANDE QUICK, Editor of The Lapidary Journal

We amused ourselves on a recent Saturday by spending it reading all the ads for lapidary equipment and supplies that have appeared in this magazine since its inception fourteen years ago. To read those ads is to read the history of the growth of the hobby and its associated businesses. For with few exceptions almost the first ad that any manufacturer placed for new equipment was in the *Desert Magazine*.

But we were a little surprised when we discovered that the magazine had been printed for more than a year before anything in the lapidary line was advertised. The first ad was for the Johns Gem Cutter, originally made in Missouri and long since gone. Oddly enough, when the wreckers started to tear apart the old building to build the former quarters of the *Lapidary Journal* in Hollywood the building was filled with a big collection of the Johns Gem Cutter and piles of literature about it. We never did learn the story behind it.

Then in June 1939 came the ads for the Felker RX "complete outfit." Warner and Grieger's (now Grieger's) first ad for a saw appeared in January 1940 and the next month came the organization of the first lapidary society in the country—the Los Angeles Lapidary society. During 1940 there was a rash of new saws and outfits advertised and Frank Crawford introduced the first assembly apart from the toy class. He had substantial equipment that included a good saw and arbor, with all the necessary accessories. These were mounted on a metal frame that could be wheeled wherever it was wanted. The early gem cutters who built their own equipment used to refer to Crawford's outfit as a "one-man band."

The most important advance during 1940 was the appearance of the diamond saw. Wilfred Eyles, the "father of the diamond saw," had taken out a patent in 1935 for a saw he invented the year before and he now began marketing the saw to the rockhounds. It had been tested by wide use in five divisions of the government and the retail price was only \$35.00. Vreeland of Portland came out with his saw at the same time and it was priced at \$39.50. Similar saws of like quality cannot be purchased today for three times the price, and we are not writing of "trim saws," a much later development. It is interesting to note that Eyles' 10 inch blade at that time was advertised at \$6.50 and Vreco's at \$5.00. Today 10 inch blades are advertised in the latest ads at from \$11.50 to \$17.80. Other sizes are in proportion.

Since that time our mail has been heavy with inquiries about the diamond saw and its problems. To explain to an inquirer just why his saw dished, required the investment of a half hour of valuable time, plus postage which was seldom supplied by the correspondent. In time we had to discard such inquiries or refer the writer to the maker of his saw by a brief postal. We tried to get someone to write an all-comprehensive article on the many problems of using a diamond saw blade for greatest efficiency. However anyone with great experience had gained it on only one type of saw. Finally Mr. Eyles agreed to write such an article for he was having the same experience. Much of his time was spent in writing long

letters explaining how to operate saws. He found that he could not get all the information he wished to convey into one letter and when he sat down to write the article he found that he could not get all the information into one article. We then suggested that he tell the complete story and if it was enough to make a book we would publish it for the three million amateur gem cutters in America; most of them needlessly wasting money, patience and gem material, because of a lack in understanding the valuable tool they were using.

As time went on we became increasingly convinced that few saws were at fault but many sawyers were. Most amateur lapidaries were like the seven-year-old boy with his first watch—not prepared to handle such a valuable machine. Just as they earlier wound their first watch too tight and broke the spring, they now ruined their first saw blade during the sawing of the first 20 inches of rock. We ruined several saws ourselves, despite the old wives' tale of "breaking in a saw by first sawing through a building brick."

Even today no manufacturer of diamond saws offers adequate instructions on the use of his instrument. The result is that dealers sell saws and then they are besieged with trouble and, because they cannot satisfy the customer in many instances by going out to his house and sawing a rock for him, the purchaser has nothing good to say about the saw. There are probably thousands of saws in America today sitting in idleness because the owners have quit in disgust. They are displeased with the manufacturer of the saw; they have no kind word for the dealers who sold them the saw; many are even disgruntled with us because we will not take the time to save them as they go down for the third time. There is nothing adequate in all the literature to which we can refer them for there is no book published on lapidary technique that even scratches the surface of the operational problems of saws.

But now we have published Mr. Eyles' book, in which every question is answered. If every manufacturer of a saw made it possible for every dealer to give every buyer of a saw one of these books free the entire picture would be changed and much valuable time and patience would be saved in several directions. The title of the new book is *The Diamond Saw And Its Operation* and its price is only \$1.20 (plus 4c tax in California.) Published by the Desert Press (for the *Lapidary Journal*) it can be purchased postpaid from the *Desert Magazine*.

If you own a diamond saw you should buy this book. A careful reading of it, by the experienced cutter as well as the novice, should make it possible for the reader to save many times the price of the book during his next twenty hours of cutting—with 10-inch blades selling at what used to be the price of a good suit of clothes.

Of course this book is not the *ultima thule*; it will perhaps uncover many unanswered questions; it may even arouse controversy. However here is the most comprehensive information for the user of a diamond saw that has ever been published.

The Diamond Saw And Its Operation by Wilfred C. Eyles — \$1.20 postpaid from *Desert Magazine*, Palm Desert, California.

Gems and Minerals

DIVISION EXAMINES CALIFORNIA GEOLOGY

The geology of parts of Orange, Riverside and San Diego counties, California, is the subject of a new bulletin issued by the California Division of Mines.

"Crystalline Rocks of Southwestern California," Bulletin No. 159, consists of three related scientific papers by different authors. "Crystalline Rocks of the Corona, Elsinore, and San Luis Rey Quadrangles" by Esper S. Larsen, Jr., is first of the trio. It deals specifically with the igneous rocks of the area. Accompanying the text is a color map showing in detail the geologic units discussed.

Three maps amplify "Geology of the Cuyamaca Peak Quadrangle, San Diego County," by Donald L. Everhart. Two recognized mining districts, the Boulder Creek and the Deer Park, lie within this quadrangle. All gold mines in each district are described in the text.

Entitled "Groundwater in the Bedrock in Western San Diego County, California," and written by Richard C. Merriam, the third report discusses principles governing the movement and collection of groundwater in bedrock. Recommendations for the location of water wells in bedrock and the methods for estimating the groundwater reserves are two sections of the report that are of particular significance.

Bulletin No. 159 is available at \$3.00 from the California Division of Mines, Ferry Building, San Francisco 11, California. California residents should add three percent sales tax to the purchase price.

Junior Rockhounds of Prescott are pictured in a full-page color illustration in the November issue of The National Geographic magazine. The youngsters help to portray the activities of rockhounds in an article, "Rockhounds' Uncover Mineral Beauty," by George S. Switzer, associate curator of mineralogy, U. S. National Museum. The junior group was organized in 1946 by John Butcher and Larry Bender. Present membership totals 40.

MOJAVE DESERT STONE SUITABLE FOR BUILDING

California's Mojave Desert has tremendous deposits of stone which might be used either in decoration or structural work. Possible building uses of several varieties were suggested in a mineralogy exhibit at the Kern County Fair, reports the Bakersfield Californian.

One example is banded rhyolite. This stone is hard enough for building block and may be used as flooring, builders state. Yet it can be cut for trim such as exterior outline or for fireplace construction. Flat chunks of it, when cut and polished, show striations that resemble landscapes rendered in shades ranging from cream to dark brown.

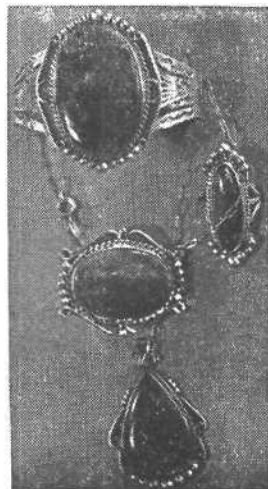
The stone is available in large quantities in the Mojave.

WRITER CITES MINERAL MUSEUM FAULTS

"Something must be done to enliven the public interest again in our mineral halls," writes David M. Seaman in an article published in *Rocks and Minerals*. Seaman, associate curator, Harvard Mineralogical Museum, suggests six faults in mineral museum management which contribute to public ignorance of minerals. The six are: (1) inadequate classification and arrangement; (2) poor lighting of exhibits; (3) Lack of any explanation for what a mineral is; (4) absence of exhibits explaining how minerals are identified; (5) poor planning of exhibits; (6) lack of originality in exhibits.

MOJAVE VALLEY CLUB SPONSORS HOBBY SHOW

Members of Mojave Valley Gem and Mineral Club invited all hobbyists to display their collections and handcraft wares at the group's annual hobby show. Several hundred visitors registered at the show, which was held in the local high school auditorium.



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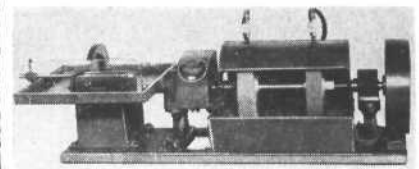
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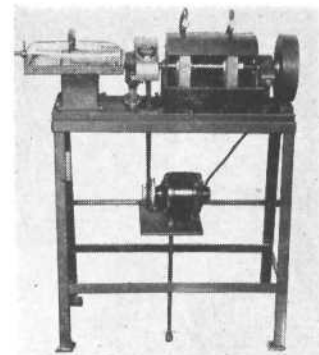
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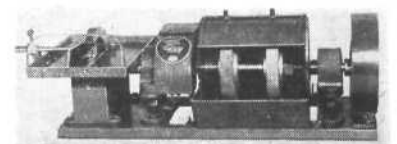
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100 POUNDS OF COPPER & CRYSTAL specimens \$25.00. Iron Oxides, Malachite, Chalcophyrite, Garnet and a variety of Calcites. You can't go wrong on this selection. L. M. Jones, Box 307, Bisbee, Arizona.

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AGATE MINES closed due to lack of help the Arizona Agate Mines will be closed. No orders please. Watch this section for new opening date. Charles E. Hill of the Arizona Agate Mines, Cave Creek, Arizona.

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FREE URANIUM SPECIMEN with each \$2.00 order. Arizona Agate \$1.00 lb. Prehistoric Fossils 6 for \$1.00. Obsidian (Smoky Topaz) 3/4 in. or larger, 10 for \$1.00. Ray Schinke, Aguila, Arizona.

William E. Phillips traveled around the world searching for specimens to add to his gem collection. He told members of Pacific Mineral society, California, about his trip and displayed his stones. Included were a Siberian amethyst of 75 carats, a deep yellow zircon of 120 carats and an opal of unusual green coloring.

Colored slides served as illustration when A. G. Ostergard of Glendale Lapidary and Gem society told members of Hollywood Lapidary society of his trip into Mexico. Emphasized were gem and mineral sources below the border.

Ed Peterson, member of San Diego Mineral and Gem society, spoke at a recent general meeting of his group. Peterson's remarks concerned the building of the San Diego, Arizona, and Eastern Railroad through Cariso Gorge and the Fish Mountains.

Relating his experiences as a member of Admiral Richard Byrd's first Antarctic expedition, C. A. Diedrich of San Diego, California, spoke to the San Jacinto-Hemet Rockhounds club. Diedrich told of sea adventures the three ships encountered enroute, and described the party's work during its two-year stay at the South Pole.

Equipment necessary for gem identification formed one of the exhibits at the first show of the Austin Gem and Mineral society. Faceting techniques were demonstrated.

Specimens collected during summer rock hunting were compared by members at the opening meeting of the Earth Science club of Northern Illinois. Agates found on the field trip to Bellevue, Iowa, commanded special interest.

Last year the Chicago Lapidary club invited various interested groups in the Chicago area to join a field trip to the strip mines at Braidwood, Illinois, where Pennsylvania fossils are found. By popular demand, the trip became an annual event. It was organized this year by the Earth Science club of Northern Illinois. Dr. Ben Hur Wilson again led the expedition.

It was the fifth annual gem and mineral show for the Orange Belt Mineralogical society in November. Exhibits were arranged in the Industrial Building on the National Orange Show grounds at San Bernardino, California. In addition to individual and group displays, demonstrations were held in silver craft, faceting and lapidary.

Formation and location of Dugway Geodes were discussed at a meeting of Wasatch Gem society, Salt Lake City. Geodes, cut and uncut, polished and unpolished specimens, were displayed. To conclude the study, a field trip was taken to the Dugway Geode location. At a subsequent meeting, W. T. Rogers spoke on "Obsidian." Members brought specimens to illustrate his remarks.

Following the evening's featured talk on "Gems of Montana," members of the Pasadena (California) Lapidary society viewed a screened documentary on the "Art of Lapidary."

REVIVE ANCIENT USE OF BLACK OBSIDIAN

It has been known for many years that black obsidian, one of several kinds of volcanic glass, was employed by American Indians as material for arrow points, knives, and other weapons and implements.

It has been proven that aborigines had yet another use for obsidian. According to the State of California Mineral Information Service, archeological investigators in Peru and Yucatan have uncovered both obsidian and pyrite mirrors, some of single mineral slabs, others constructed of fragments cemented together in mosaic fashion.

Centuries have passed since the Mayas made obsidian mirrors. However, only in recent years has interest been renewed in utilizing the mineral for reflection. During World War II mirrors of obsidian were used for certain naval instruments. Today obsidian mirrors are found in telescopes, spectrographs and other optical instruments.

Designed to help members discover their lapidary mistakes, a "rock clinic" was organized at a meeting of the San Jose Lapidary society in California. Members submit stones each month for judging, criticism and advice.

Some 150 mineral enthusiasts from Washington, Idaho, Oregon and California searched for petrified wood and calcite crystals at the "All Rockhounds Pow-wow" held near Sunnyside, Washington. A discussion of Indian artifacts followed the rock hunting. Members are anxious to establish the Adam East collection of Indian artifacts in a privately developed museum at Moses Lake.

Copper, in its various forms and affinities, was displayed at a recent meeting of the Compton Gem and Mineral club. Edwin L. Roth of Pasadena, California, was guest speaker and discussed the 30 different copper specimens.

Among guest exhibitors at the Compton, California, Rockhound Fair was the Gem Cutters Guild of Los Angeles, which won a special award for its lapidary display. E. H. Pauls showed jewelry and A. C. Gustafson displayed glass replicas of the Jonker diamonds.

Commercial products of fluorescent and luminous materials were exhibited by Marcel Vogel before the Gem and Mineral society of San Mateo County, California. Vogel spoke to the group on the fluorescence of rocks and minerals.

Members of the Tucson Gem and Mineral society met to view two films. One, "Treasures of the Sea" was concerned with magnesium; the other told "A Story of Copper."

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PRIZEWINNING JEWELRY DISPLAYED

Comparing the geology of his native Virginia with that of the Midwest, Dr. Bruce Lineburg, head of the biology department at Lake Forest College, Illinois, spoke on "Continental Glaciation" at a meeting of the Chicago Rocks and Minerals society. The evening's display table featured prize-winning jewelry designed and made by Mr. and Mrs. E. Goff Cooke. Especially noteworthy was a set fashioned of Belgian Congo malachite set in silver.

From Cairo to Dakar, the African trip of George Burman was described to members of the Mineralogical society of Southern California at a meeting held in Pasadena. Colored slides were shown by the mineral collector to illustrate his lecture.

Tacoma Agate club met to view a special mineral display arranged by members. The exhibit was exclusively of specimens found in the state of Washington.

Onyx marble is generally regarded as a deposit from cold water solutions which may be formed at the surface around exits of springs or in rifts, cavities or cracks in the rock through which the solutions flow. So states J. W. Fisher, president of Southwest Onyx and Marble company, in an article in *Mineral Notes and News*. It also may take the form of stalactites, stalagmites and surface coatings in limestone caves, in which case it is known as cave onyx.

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In its first exhibit, the newly-formed Shadow Mountain Gem and Mineral society of Palm Desert, California, won second-place honors at the Hemet Festival. Members' efforts are now directed toward the club's own gem and mineral show to be staged in February in connection with the Riverside County Fair and Date Festival.

President George Merrill Roy has announced the group is ready to start classes in its Lapidary school. A quonset hut has been leased to house equipment and the society presented a variety show to raise funds for purchase of more tools. Subjects emphasized this first semester will be mineralogy, gemology and silvercraft.

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Annual Pegleg Trek to be Held in Borrego Valley

According to Ray Hetherington and Harry Oliver, plans are now in progress for the fourth annual Pegleg Gold Trek and Liar's contest to be held in Borrego Valley New Year's eve and the following day.

The evening program is to be staged at the great rock monument where every gold-hunter is expected to deposit 10 stones before starting on his quest for the legendary black nuggets made famous nearly 100 years ago by Pegleg Smith.

Some say Pegleg was a hijacker, others that he high-graded his nuggets from the old Fortuna mine—but the legend of his discovery of a hill-top covered with black gold persists, and every year men with burros—and more recently with jeeps—roam the Colorado desert in quest of Pegleg's placer discovery.

On New Year's eve the annual Liar's contest will be staged at a big campfire meeting with Harry Oliver acting as master of ceremonies. Both men and women will compete for the bronze trophy—a statue of Pegleg Smith modeled by Cyria Henderson, and presented annually by Ray Hetherington who with Harry Oliver first sponsored the annual event.

Most of those who gather at the New Year's eve contest, camp on the desert overnight. The Pegleg Trek has become a sort of reunion of the old-time prospectors in the Southwest.

Howard Clark of Yucca Valley, California, writer and prospector, was the winner of last year's contest.

The committee in charge this year will consist of Oliver, Hetherington, Harry Woods, Ralph Caine, Desert Steve Ragsdale, Ed. Duval, W. M. Scott and Randall Henderson.

Residents of Borrego Valley have promised to have an ample wood supply for the campfire, and to signpost the road for those who have not previously attended the program. Campers are advised to take plenty of water as there is none available at the Pegleg Monument.

THREE MAIN TYPES OF ROCKS EXPLAINED

There are three main classes of rocks: igneous, sedimentary, and metamorphic. The classification, *Pick and Dop Stick* explains, is based on mode of origin rather than age. There are two main types of igneous rock, volcanic and plutonic. The volcanics have cooled rapidly from lava flows which reached the surface. Rhyolite and

obsidian are examples. The plutonics have cooled much more slowly and at varying depths. Among them are the granites, syenites and peridotites. Sedimentary rocks are formed by the breaking down, through weather, of pre-existing rocks. Shale, limestone, chalk and conglomerate may be included. Metamorphic rocks were originally igneous or sedimentary, but had their characteristics changed through great heat and pressure.

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SIMPLE TEST APPROXIMATES SPECIFIC GRAVITY OF MINERAL

A simple method for determining approximate specific gravity is suggested by John Goette in *Jade Lore*. Tie a piece of string near the center of a rod to make a balance. Fasten the mineral whose gravity is to be determined to one end of the rod, a weight to the other and move the center string to achieve perfect balance. Measure the distance from the center string to the one to which the mineral is tied. Then let the mineral being tested hang in water and move the center string until perfect balance is achieved again. Again measure the distance from center string to that holding the mineral and divide the second measurement into the first. The result will be a rough approximate specific gravity of the mineral.

A mineral has a composition definite enough to be written with a chemical formula.

Gold has been found in every county in California.

GEOLOGY'S NEWER METHODS DISCUSSED

While some scientists attempt to explain the origin of the earth, others try to determine precisely what the earth consists of and what its structure is. In his talk, "Geology and Its Newer Tools," A. B. Meiklejohn outlined for Los Angeles Mineralogical society members the various theories of earth formation and constitution, emphasizing the scientific methods employed in propounding those theories.

"Even though we have a satisfactory picture of the earth's structure, we still are faced with the problem of how to locate minerals and ore bodies," explained Meiklejohn. Since the origin of mineral bearing bodies is controlled largely by general geologic structure, structural geology was one of the earliest guides used.

But now many instruments help recognize and analyze fault structures. These "newer tools" described by the speaker include ultra-violet lamps, Fischer M Scopes, magnetometers, scintillometers, seismographs, Geiger counters and aerial photography.

Another "tool" now in use is Structural Petrology, the study of space relations of rock minerals and their associated line textures.

Shark Tooth Hill, near Bakersfield, California, was the destination of Delvers Gem and Mineral society, Downey, on a group field trip. Delvers members were after fossil teeth, many of which are to be found at the site.

Sequoia Mineral society of California joined the Fresno Gem and Mineral society in a show last month at Fresno District Fairgrounds. This was the second annual show sponsored by the two societies.

Members of Coachella Valley Mineral society, California, are reviewing entries in their group's song contest to select a club song. Winning lyrics will be included in mimeographed booklets for campfire singing on field trips.

Hundreds of arrowheads were included in a Stone Age exhibit sponsored by the Rio Grande Rock club of Colorado. The exhibit contained many other Indian artifacts from the San Luis Valley, where they are found of good workmanship and in complete form.

Thomsonites, beach agate nodules and thunder eggs were objects of searching by Minnesota Mineral club members on a recent field trip to North Shore.

A four-day field trip to Colorado desert gem areas opened the fifth year of activity for the Orange Coast Mineral and Lapidary society, California. Several districts were visited. Material found included fire agate, desert roses, nodules, geodes, sagenite, agate and sard.

A bulletin of the Rocky Mountain Federation of Mineral societies announces new officers of the Colorado Mineral society. Installed recently were James Harbut, president; Ernest E. Parshall, first vice-president; Calvin B. Simmons, second vice-president; Mrs. Jeannette Haralson, secretary-treasurer; Mrs. C. R. Williams, corresponding secretary. One of the society's current projects is demonstration of mineral collections with both long and short wave lights to patients in Fitzsimmons Hospital.

Members of Delvers Gem and Mineral society of Downey, California, participated in a unique "field" trip. Beginning with potluck luncheon at Tom Holbert's workshop in Hollywood, they progressed to Blair Hildebrand's shop in Bellflower to watch his lapidary demonstration. The evening's tour ended with a stop at the workshop of President Leland Bergen. Delvers enjoyed a November field trip to the Lavic area for jasper and agate. They plan to gather petrified wood and palm wood at Castle Butte in December.

Plans for a lapidary school in Prescott, Arizona, were announced at a meeting of the Yavapai Gem and Mineral society by Ernest E. Michael, president. The course would offer weekly sessions in a ten-week term. President Michael also reported success of the society's exhibit at the Yavapai County Fair.

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Lloyd Gigeur, recently returned from a trip to the gold mines in South Dakota's Black Hills, spoke of his experiences before members of San Diego Lapidary society. Gigeur reported that an average of \$56,000 in gold is processed daily in the Coyote state.

The highly mineralized and intensively mined mountain country near Oro Grande, New Mexico, was visited by members of El Paso Mineral and Gem society on a recent field trip. The group searched for garnets near the old iron mine in the area.



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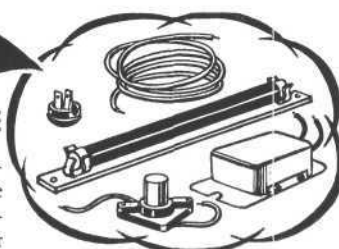
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Answers to True or False

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- 1—False. It merely is an old cowboy superstition.
- 2—True.
- 3—False. Date palms were brought to the United States from Africa and Asia.
- 4—False. The Hopi Indians make Kachinas.
- 5—True.
- 6—False. Mistletoe never grows on Joshua trees.
- 7—True.
- 8—False. The Bird Cage theater may still be seen at Tombstone, Arizona.
- 9—True.
- 10—False. *Camino* means road or highway.
- 11—False. Chief mineral from the Ruth pit is copper.
- 12—True.
- 13—True.
- 14—False. Adolph Bandelier was an archeologist and writer.
- 15—False. Nearest town to Petrified Forest National Monument is Holbrook.
- 16—True.
- 17—False. Salt River valley gets its water from Roosevelt dam.
- 18—True.
- 19—False. The shores of Salton Sea for the most part are barren.
- 20—True.



By RANDALL HENDERSON

PALM DESERT, the little community which began to take root in a sandy cove at the base of the Santa Rosa Mountains five years ago when this location was selected for the new home of the *Desert Magazine*, is becoming civilized.

Early in November, Ernie and Betty Maxwell published the first edition of the *Palm Desert Progress*, and also the *Cathedral Citizen* for the neighboring community of Cathedral City, five miles away.

It is fun to live in a community so new that the paving of the streets, the opening of the first drug store and the starting of the first newspaper are thrilling events.

My friend Guy Hazen, who spends much of his time out prospecting the hills for semi-precious gem material and fossil deposits, came into the office last week with a drab looking rock under his arm. He put it on the table, then turned it around so I could see the beautifully polished surface on the other side. It was just a chunk of ordinary granite with flecks of copper stain that you and I—unless you are an expert—would have passed without a second glance. Cut and polished, it had become a beautiful pair of bookends that would be prized by anyone.

Guy had found a large deposit of it only two miles from the paved highway near Salome, Arizona. Thousands of prospectors have passed over the spot heading for the hills beyond. The copper content was too low to interest a mining man. But the sharp eyes of an expert gem-pro prospector could visualize the beauty those green stains would acquire under the polishing buffer.

It is my opinion that the rockhounds have scarcely begun to tap the possibilities which the desert holds for the amateur and professional lapidary. They have been picking up just the most obvious material that happens to lie on the surface. The desert still holds unlimited treasure for those who go a little further and study the rocks a bit more carefully. I am sure no hobby contributes more to health and happiness.

Among the delights of living on the desert are the colorful sunrises and sunsets. Because the air generally is clear we see more of them out here than elsewhere.

Then a few weeks ago the law demanded that we set our clocks ahead—the end of daylight saving, they called it. Under the new schedule we were up too late to see the sunrise, and it was dark before the working day was over.

So, Cyria and I have adopted our own daylight saving program. We just wouldn't be pushed around by any dumb legislators in Sacramento or Washington. Now we are up before the sun comes over the Santa Rosa Mountains, at work by seven o'clock, and in bed at nine. It isn't practicable for everyone, but for those who live on

the desert we recommend it. We get more lift out of that early sunrise hour than any other hour of the day.

Among the visitors to the *Desert Magazine* office during the past week were Otis and Margaret Marston, two of my companions on the Norman Nevills Grand Canyon expedition of 1947.

In the last three years Otis has made three trips through Grand Canyon with inboard and outboard motor boats. He believes the power-boats will become increasingly popular for adventurous folks who want to experience the thrill of running the Grand Canyon rapids. The power boats need a high river—30,000 second feet or more—to navigate the rapids successfully. At that stage most of the midstream boulders are submerged. With detachable motors it is possible to make the 240-odd mile trip from Lee's Ferry to Boulder City in from three to five days, or even less.

But that is too much speed. If I ever make the trip again I am sure I will prefer the oar-propelled cataract craft used so successfully by Norman Nevills, or rubber rafts, which have proved their stability for running the rapids. Just why anyone should want to race through those gorgeous canyons at break-neck speed is beyond my ken.

Soon after this issue of *Desert Magazine* reaches its readers, the great trek to Death Valley will be starting—the trek of thousands of Americans who plan to be present at the annual Encampment of the '49ers December 1 and 2.

No grand spectacle is planned this year. Instead, the two-day program will be devoted mostly to art and mineral exhibits and various entertainment features at Furnace Creek.

Those who have visited Death Valley are aware that hotel accommodations are so limited only a small fraction of the visitors will be able to secure rooms. A majority of those who attend will not be looking for rooms. They look forward to this event as an opportunity to spread their bedrolls on the floor of Death Valley and enjoy a night under the stars—just as did the original '49ers more than 100 years ago.

I will never forget the spectacle two years ago when, from a low ridge above that valley, I looked down on a thousand tiny campfires spread over the floor of the valley—the fires of motorist-campers from all over the Southwest having more fun than they had experienced for a long time—just cooking their own camp dinners and then sleeping on the ground, with perhaps an air mattress to insure a good night's rest. It is good for humans to do that—to get out of the groove of luxury in which we normally live, and sleep close to the good earth.

If you plan to camp out, I would suggest that you take some firewood and extra water. These items are not plentiful in Death Valley.

BOOKS OF THE SOUTHWEST . . .

BLACK GOLD IS NO MYTH SAYS GEOLOGIST-AUTHOR

Ralph L. Caine's paper-covered *Lost Desert Gold* is the newest and one of the most comprehensive stories yet written about the lost mines and treasures of the Imperial, Coachella and Borrego valleys in Southern California.

Caine, graduate geologist and member of the California and American Bar Associations, is an inveterate prospector himself, and has correlated his simply told tales of lost treasure with the geology of the region. Since there are gold lodes on both sides of the Colorado Desert—in the Cargo Mucho and Picacho mountains on the east, and the Volcan and Oriflame mountains on the west—Caine considers it only reasonable to assume that placer gold in considerable quantity has found its way to the great desert basin between. The "black gold" of the Pegleg Smith stories, he believes, is entirely plausible. Black gold, he suggests, "would merely be gold from a placer deposit that had been trapped by a lava flow or hardened fault muds."

The author devotes many pages to the Pegleg gold, and presents convincing evidence that such a placer deposit as Pegleg Smith is said to have discovered is geologically possible.

This is a book that belongs in the library of every treasure hunter.

Published by Desert Magazine Press, Palm Desert, California. 71 pp. 15 maps and photos by the author. \$1.00.

TRAIL BLAZERS ON THE DESERTS OF UTAH

With all its rich and varied history, the West has few episodes more fascinating than the pioneering of immigrant trails across the great Salt Lake country.

As its 19th volume of the *Utah Historical Quarterly*, the Utah Historical Society this year presents *West from Fort Bridger*, a study by the late J. Roderic Korn of Utah trails of 1846-1850. The volume deals with some of the most celebrated chapters in the history of American trails, identifying for the first time all the routes of 1846 across Utah and rendering certain where these routes went and why.

The single five-year period of trail history which begins in 1846 embraces the absorbing story of the Donner party and the Cutoff which became for them a road to death; the gold rush to California; the trains of covered wagons bearing hopefuls to a wonderland. In *West from Fort Bridger*, those five

years become alive for the reader who follows the adventures, hardships and agonies of desert travelers through their own starkly real accounts in diaries and journals.

Original texts have been carefully annotated by Mr. Korn and his staff, and the addition of extensive notes and introductions round out the wealth of information they contain. Numerous maps and illustrations, including photographs of the diarists themselves, complete a compelling identification of reader with traveler.

Also included in the study is a section on T. H. Jefferson and his extraordinary map of the emigrant road from Independence, Missouri, to San Francisco. A modern map of the country traversed by the Hastings Cutoff, together with the Jefferson map, are contained in a back pocket of the book.

In *West from Fort Bridger*, the Utah Historical society brings to readers one of the most important contributions to Western Americana published this year. It also is one of the most interesting, with its collection of absorbing personal accounts of pioneering through the immigrant trails across Utah.

Vol. 19 of the *Utah Historical Quarterly*; published 1951 by the Utah Historical society. 297 pp. Available in paper (\$3.00) or maroon fabrikoid binding, \$4.50.

IN THE WORLD OF CLAW AND FANG

In *Born to Battle*, a slender volume of fourteen stories, S. Omar Barker tells of the trials and tribulations in the animal kingdom he so well knows. Born and reared in the wilds of the high mountains of New Mexico, Barker has come to talk and think in the ways of the wild-life about him. The reader feels a real kinship with and a deep sympathy for the hard playing, hard working, hard living four-footed, fur-bearing inhabitants of this rugged mountain world.

Yet, Barker never oversteps the reader's credulity in giving the power of reason to the beasts of the woods. They are always animals, possessing only natural instincts which often enough are startling in their logic, though never unbelievable.

With adroit dramatic sense, the author intermingles the men whose habitat in these mountains is as natural to them as it is to wild life. Cowboys, ranchers, prospectors and hermits move through the stories touch-

ing the lives of the cougars, coyotes, bears and other beasts as if they were all made in a like mold, yet neither the men nor the animals are made to seem foolish in order to produce thrilling action.

Barker tells these stories in a highly adult manner. The book is not recommended for the very young.

Published by University of New Mexico Press. 187 pp. \$4.00.

DEEP INTO THE HEART OF THE WESTERN RANGE

Ross Santee's cowboys and miners live, they do not simply ride, swear and have hackneyed adventures against a background of traditional "wild westness."

Hardrock and Silver Sage is the tale of a hardrock miner, Pop, and his two motherless sons. Tommy, who loved hunting and the cowboy life, tells the story. Robin hated hunting and killing, was the sensitive artist. Pop was a philosopher and idealist, blacklisted at the mines because the wrongs and injustices of the world had caused him to have Socialistic ideas.

Hardships, exciting adventure, the true flavor of the Old West, written by a man who lived and loved it, are the stuff of *Hardrock and Silver Sage*. Characters, good and bad, and what made them so, move through the lives of Pop, Tommy and Robin—high adventure of a way of life that has gone forever—but that is not all. The reader will adventure too in the inner fastnesses of the human spirit in the mountain and desert land which always has, and always will, bring out realities too often lost in our hurried, mass civilization. And what reason for art in any medium if it ignores the spirit?

Delightful sketches by the author.

Published by Charles Scribner's Sons, New York. 225 pp. \$3.00.

Legendary and Geological History of

Lost Desert Gold

Written by a geologist who has spent years of travel and research in quest of the truth about the legendary gold mines of the California desert—and who believes there is sound geological basis for the tales of lost mines in this region.

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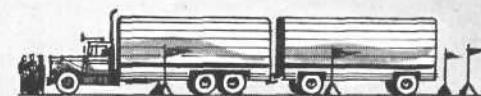
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